



AFCTN Test Report 94-005

AFCTB-ID
93-030



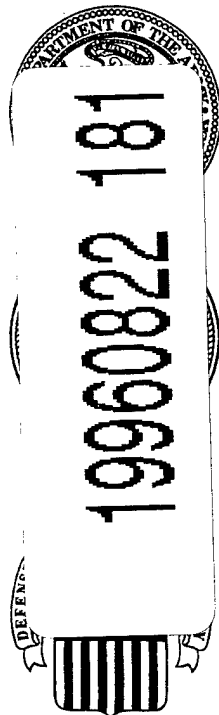
Technical Publication Transfer

Using:



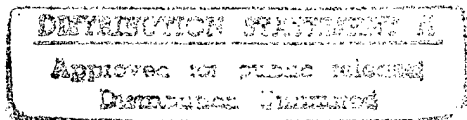
Northrop Corporation's Data

MIL-D-28000A (IGES)
MIL-M-28001A (SGML)
MIL-R-28002A (Raster)
MIL-D-28003 (CGM)



Quick Short Test Report

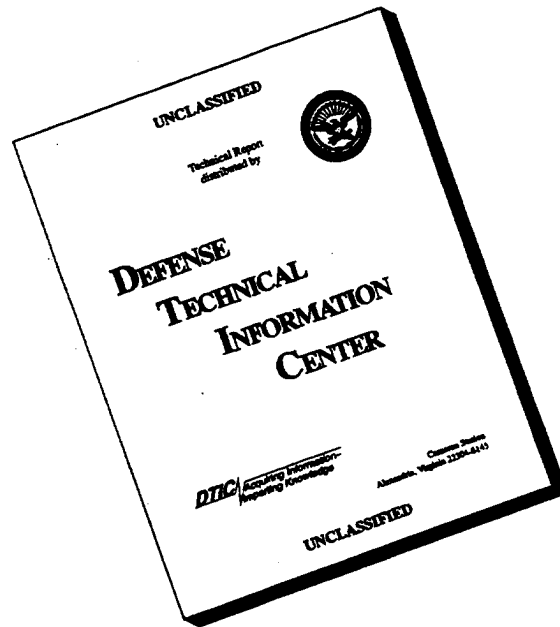
13 April 1993



Prepared for
Electronic Systems Center

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Quick Short Test Report
13 April 1993

Prepared By
Air Force CALS Test Bed
Wright-Patterson AFB, OH 45433

AFCTB Contact
Gary Lammers
(513) 427-2295

AFCTN Contact
Mel Lammers
(513) 427-2295

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1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Northrop Corporation's interpretation and use of the CALS standards in transferring technical publication data. Northrop used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFCTB 93-030

Date of
Evaluation: 13 April 1993

Evaluator: George Elwood
Air Force CALS Test Bed
DET 2 HQ ESC/ENCP
4027 Colonel Glenn Hwy
Suite 300
Dayton OH 45431-1672

Data
Originator: John P. Kent
Northrop Corporation
B-2 Division
L591/GK
8900 East Washington Blvd
Pico Rivera CA 90660
(310) 948-0624

Data
Description: Technical Manual Test
1 Document Declaration file
1 Document Type Definitions (DTD)
4 Initial Graphics Exchange Specification
(IGES) files
1 Text file
1 Raster file
1 Computer Graphics Metafile (CGM) file

Data
Source System:

IGES

HARDWARE

Unknown

SOFTWARE

Unknown

TEXT/Standard Generalized Markup Language (SGML)

HARDWARE
Unknown
SOFTWARE
Unknown

Raster

HARDWARE
Unknown
SOFTWARE
Unknown

CGM

HARDWARE
Unknown
SOFTWARE
Unknown

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN Tapetool v1.2.8 UNIX
XSoft CAPS/CALS v40.4
Texas Instruments (TI) Tapetool v1.0.1

MIL-D-28000 (IGES)

Sun SparcStation 2

AUTODESK AutoCAD R12
ArborText iges2draw
IGES Data Analysis (IDA) Parser/Verifier v92
IDA IGESView v3.05
International TechneGroup Incorporated
(ITI) IGES/Works v1.3
Rosetta Technologies Preview v3.2

PC 486/50

AUTODESK AutoCAD 386 R12
AUTODESK AutoCAD 386 R11
AUTODESK Micro Engineering Solutions
(MES) CheckMark v1.0
Cadkey Cadkey v5.02

Wiz Worx *igs2jet*

MIL-M-28001 (SGML)

Cheetah Gold 486

Datalogics *ParserStation* v3.36
Exoterica *XGMLNormalizer* v1.2e3.2
Exoterica *Validator* v2.0 EXL.
McAfee & McAdam *Sema Mark-it* v2.3
Public Domain *sgmls*

MIL-R-28002 (Raster)

SUN SparcStation 2

ArborText *g42tiff*
AFCTN *validg4*
AFCTN *calstb.475*
IDA *IGESView* 3.0
Island Graphics *IslandPaint* 3.0

Cheetah

Inset Systems *HiJaak* V2.1
Inset Systems *HiJaak Window* v1.0
Corel Ventura *Publisher*

MIL-D-28003 (CGM)

SUN SparcStation 2

ArborText *cgm2draw*
Island Graphics *IslandDraw* 3.0

Cheetah Gold 486

Advance Technology Center
(ATC) *MetaView* R 1.12
ATC *MetaCheck* R 2.05
Software Publishing Corporation
(SPC) *Harvard Graphics* 3.05
Inset Systems *HiJaak* v2.1
Inset Systems *HiJaak* v1.0 Windows
Micrografx *Designer* 3.1
Corel Ventura *Publisher*

Standards

Tested:

MIL-STD-1840A
MIL-D-28000A
MIL-M-28001A
MIL-R-28002A
MIL-D-28003

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files recorded on the tape.

3.2 Transmission Envelope

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The tape was run through the AFCTN *Tapetool* v1.2.8 utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read without a reported problem using XSoft's *CAPS read1840A* utility.

The tape was read without a reported problem using TI's *Tapetool* v1.0.1.

3.2.2 Declaration and Header Fields

No errors were found in the Document Declaration file or data file headers.

The physical structure of the tape meets the CALS MIL-STD-1840A requirements.

4. IGES Analysis

The tape contained four IGES files. These files were evaluated using IDA's *Parser* and *Verifier*. These utilities reported that all four files contain similar basic IGES cautions, but they meet the CALS Class I specification.

Because the cautions were the same for all four files, file D001Q004 will be used as an example. File D001Q007 is also include in the Appendix as a second example. The following cautions are basic IGES cautions and not CALS errors.

The first noted caution was a warning on line thickness. The maximum and minimum line thickness were the same.

Maximum line thickness = 6.300000E-03

Minimum line thickness = 6.300000E-03

CAUTION 2317: Maximum line thickness equal to minimum thickness.

The reported caution was in entity 104. The start and end points were offset.

*** Entity type: 104

WARNING 2265: Start point off conic by 1.190300E-03 at D 539.

WARNING 2039: End point off conic by 1.388423E-03 at D 743.

Although not reported in file D001Q004, file D001Q007 reported a polynomial degeneration. This was also reported in the other two files.

*** Entity type: 112

WARNING 2238: Polynomial segment (0) at D 1351 is degenerate.

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were Performed using the default settings.

The files were converted using the 5.1 IGES translator in AUTODESK's AutoCAD R12. The error log from files D001Q004 and D001Q007 are included in the Appendix to this report. These logs report similar errors as IDA parser. Shown below are samples of the errors reported by this utility and actions taken to correct the problem.

*** Warning (IEVM_BAD_VECTOR_124) ***

(DE 493, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

*** Warning (IEVM_BAD_START_POINT_104) ***

(DE 495, TF 104:1) Entity's start point not on the conic. Value found was

1.2643260e-002, 6.7795300e-003.

Action taken: Start point moved 1.5608861e-003 units, from 1.2643260e-002,

6.7795300e-003 to 1.4204146e-002, 6.7795300e-003.

The generated images appear to match the files output by other CAD software available in the AFCTB.

The four files were converted using Cadkey's *ig2c* utility with no reported errors. The resulting files were read into Cadkey's *Cadkey*, displayed and printed. The resulting images appear to match the other output copies.

The four files were read into MES's *CheckMark* software without a reported error. The only noted error was the missing arrowheads on the leader lines.

The four files were read into IDA's *IGESView* without a reported error. The images displayed and printed, which appeared to match the other hard copies.

The four files were read into ITI's *IGESWorks* without a reported problem. The displayed and hard copy output appear to match the files of other systems.

The four files were converted using Rosetta Technologies' *Prepare*. This utility reported some non-supported entities during the conversion process. The resulting files were imported into *Preview* and displayed. The resulting hard copies match the output of the other systems.

The four files were read into the *Wiz Worx igs2jet* utility. This program will directly output an IGES file to a HP LaserJet printer. No errors were reported during this procedure. The resulting hard copies matched the other hard copies generated during this evaluation.

The four files were converted using ArborText's *iges2draw* utility. The resulting files were read into Island Graphics' *IslandDraw*. When this was accomplished nothing displayed on the screen. The files were sent to both ArborText and IDA who provides the translator to ArborText. The error was traced to a "bad" IGES file. IDA pointed out that the IGES file was placed in a negative area. Note in the view information for file Q004 from AUTODESK'S AutoCAD 5.1 translator the location of the view. The X value has a negative value which placed the view outside the normally define area. The CAD and CAD viewing software was able to move the viewing area to cover the negative value.

A new view volume has been generated for the view with:

XMIN (-4.641649), XMAX (0.401133),
YMIN (0.456990), YMAX (7.663985),
ZMIN (-0.688634), ZMAX (0.688634).

Not listed in the ArborText conversion manual but shown using the help option with *iges2draw* is the bound option. This permits the negative number to be accepted and used. When this option was tried the images was displayed and printed, matching the other generated files. The information on the bound option was provided by IDA and ArborText.

No CALS errors were reported during the evaluation of these files.

5. SGML Analysis

The AFCTB has several parsers available for evaluating submitted DTD and Text files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. These products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings unless specified in the report. Changes to DTD or Text files required by each system are not documented in the report.

The Text and DTD files from the tape were evaluated using Datalogics' *ParseStation*. No errors were reported in the DTD or Text file.

The Text and DTD files from this document were evaluated using the Exoterica *Validator* parser. This parser reported three mixed content models and one no value for attribute.

The Text and DTD files from this document were tested using the Exoterica *XGMLNormalizer* parser. No errors were reported during this procedure in either the DTD or Text file.

The Text and DTD files from the tape were evaluated using McAfee & McAdam's *Sema Mark-it* parser. No errors were reported in the DTD or Text file.

The Text and DTD files from the tape were evaluated using the Public Domain *sgmls* parser. No errors were reported during the use of this utility in either the DTD or Text file.

The Text files meet the CALS MIL-M-28001A specification.

6. Raster Analysis

The tape contained one Raster file. The file was evaluated using the AFCTN *validg4* utility which reported the file as a valid CALS Raster file. The file was viewed using the AFCTN *calstb.475* utility. The image was straight with few orphan pixels noted.

The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were Performed using the default settings.

The file was converted, displayed, and printed using the following software tools without a reported error.

Rosetta Technologies' *Prepare/Preview*
Inset System's *HiJaak*
Corel's *Ventura Publisher*
Inset Systems' *HiJaak for Windows*
IDA's *IGESView*
Carberry's *CADLeaf*

The Raster file meets the CALS MIL-R-28002A specification.

7. CGM Analysis

The tape contained one CGM file. This file was evaluated using ATC's *MetaCheck* with CALS options. This utility reported that the file meets the CALS MIL-D-28003 specification.

The beta AFCTN *validcgm* utility reported some problems.

The AFCTB has several tools for viewing CGM files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor and indication of CALS capability. All operations were Performed using the default settings.

The file was viewed using ATC's *MetaView*. The image displayed correctly with some problems noted in the text area. The file did generate an error message during this procedure.

The file was converted using ArborText's *cgm2draw* utility without a reported error. The resulting file was read into Island Graphics' *IslandDraw* and displayed. The images appeared on the screen and printed without the text being displayed. This was traced to the background color and text being the same color.

The file was imported into Carberry's *CADLeaf* software without a problem. The background was a darker color which permitted the text to be displayed.

The file was imported into SPC's *Harvard Graphics* with reported errors. Line style errors and non-translated objects were reported. When displayed and printed the image consisted of random lines, arcs and text.

The file was imported directly into Island Graphics' *IslandDraw* without a reported error. This resulted with all the graphics displayed along the top of the screen.

When an attempt to read the file into Corel's *Ventura Publisher* was made, the software reported that the file was not a valid file.

When the file was imported into the *Micrografx Designer*, nothing was displayed and no error messages were generated.

According to Michael Harrison of Micrografx, "Micrografx is aware of the problems associated with reading these files and is working on a solution to be implemented in a future release of our products."

When the file was imported into Inset System's *HiJaak for Windows* nothing was displayed and no error message were generated.

When an attempt to convert the file using Inset System's *HiJaak for DOS*, the computer hung and required a reboot. This was tried twice with the same results.

The file was reported as meeting the CALS MIL-D-28003 specification.

8. Conclusions and Recommendations

In summary, the physical tape structure from Northrop Corporation is correct.

The IGES files on the tape meet the CALS MIL-D-28000A specification, although some basic IGES errors were reported.

The DTD and Text files meet the CALS MIL-M-28001A specification.

The Raster file meets the CALS MIL-R-28002A specification.

The CGM file was reported as meeting the CALS MIL-D-28003 specification.

The submitted tape and data files meet the CALS MIL-STD--1840A requirements defined above.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Tue Apr 13 08:07:18 1993

MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set082

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000009	Extracted
D001G002	DTD	D/00260	02048/000010	Extracted
D001H003	Output Specification	D/00260	02048/000050	Extracted
D001Q004	IGES	F/00080	02000/000281	Extracted
D001Q005	IGES	F/00080	02000/000138	Extracted
D001Q006	IGES	F/00080	02000/000224	Extracted
D001Q007	IGES	F/00080	02000/000224	Extracted
D001C008	CGM	F/00080	00800/000062	Extracted
D001R009	Raster	F/00128	02048/000017	Extracted

Catalog Process terminated normally.

9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8

Standards referenced:

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Tue Apr 13 08:06:28 1993

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01

CONTROLLER

4

Label Identifier: VOL1
Volume Identifier: ITDS01
Volume Accessibility:
Owner Identifier:
Label Standard Version: 4

HDR1D001

ITDS0100010001000100 93090 93090 000000 CONTROLLER

Label Identifier: HDR1
File Identifier: D001
File Set Identifier: ITDS01
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 93090
Expiration Date: 93090
File Accessibility:
Block Count: 000000
Implementation Identifier: CONTROLLER

HDR2D0204800260

00

Label Identifier: HDR2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 1.

***** Tape Mark *****

EOF1D001 ITDS0100010001000100 93090 93090 000001 CONTROLLER

Label Identifier: EOF1
File Identifier: D001
File Set Identifier: ITDS01
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 93090
Expiration Date: 93090
File Accessibility:
Block Count: 000001
Implementation Identifier: CONTROLLER

EOF2D0204800260

00

Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00

***** Tape Mark *****

<<<< PART OF LOG FILE REMOVED HERE >>>>

***** Tape Mark *****

***** Tape Mark *****

End of Volume ITDS01 #####
End Of Tape File Set

Deallocating /dev/rmt0...

Tape Import Process terminated with 0 error(s), 0 warning(s),
and 0 note(s).

9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number 8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Tue Apr 13 08:07:18 1993

MIL-STD-1840A File Set Evaluation Log

File Set: Set082

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: 1B-2A-2-21JG-10-1

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19910301

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,
TechneCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: 1B-2A-2-21JG-10-1

dstrelid: NONE

dtetrn: 19930331

dlvacc: NONE

filcnt: T1, H1, G1, C1, Q4, R1

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: JOB GUIDE

docttl: ENVIRONMENTAL CONTROL - ECS CONTROL

Found file: D001T001

Extracting Text Header Records...

Evaluating Text Header Records...

srcdocid: 1B-2A-2-21JG-10-1

dstdocid: 1B-2A-2-21JG-10-1

txtfilid: W

doccls: UNCLASSIFIED

notes: NONE

Saving Text Header File: D001T001_HDR

Saving Text Data File: D001T001_TXT

Found file: D001G002
Extracting DTD Header Records...
Evaluating DTD Header Records...

srcdocid: 1B-2A-2-21JG-10-1
dstdocid: 1B-2A-2-21JG-10-1
notes: NONE

Saving DTD Header File: D001G002_HDR
Saving DTD Data File: D001G002_DTD

Found file: D001H003
Extracting Output Specification Header Records...
Evaluating Output Specification Header Records...

srcdocid: 1B-2A-2-21JG-10-1
dstdocid: 1B-2A-2-21JG-10-1
notes: NONE

Saving Output Specification Header File: D001H003_HDR
Saving Output Specification Data File: D001H003_OS

Found file: D001Q004
Extracting IGES Header Records...
Evaluating IGES Header Records...

srcdocid: 1B-2A-2-21JG-10-1
dstdocid: 1B-2A-2-21JG-10-1
txtfilid: W
figid: NONE
srcgph: B2AJG2111-0101A
doccls: UNCLASSIFIED
notes: NONE

Saving IGES Header File: D001Q004_HDR
Saving IGES Data File: D001Q004_IGS

<<<<< PART OF LOG REMOVED HERE >>>>>

Found file: D001C008
Extracting CGM Header Records...
Evaluating CGM Header Records...

srcdocid: 1B-2A-2-21JG-10-1
dstdocid: 1B-2A-2-21JG-10-1

txtfilid: W
figid: NONE
srcgph: B2AJG2111-0103D
doccls: UNCLASSIFIED
notes: NONE

Saving CGM Header File: D001C008_HDR
Saving CGM Data File: D001C008_CGM

Found file: D001R009
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: 1B-2A-2-21JG-10-1
dstdocid: 1B-2A-2-21JG-10-1
txtfilid: W
figid: NONE
srcgph: B2AJG2111-0104D
doccls: UNCLASSIFIED
rtype: 1
rorient: 000,270
rpelcnt: 003408,004408
rdensty: 0400
notes: NONE

Saving Raster Header File: D001R009_HDR
Saving Raster Data File: D001R009_GR4

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

10. Appendix B - Detailed IGES Analysis

10.1 File D001Q004

10.1.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***
***      MARCH 1992      ***
***   IGES Data Analysis   ***
***   (708) 449-3430      ***
```

Input file is /novell/9330/q004.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is April 13, 1993 9:09 AM

*** File and Product Name Information ***

```
File name from sender   = '0101A.gef.igs'
File creation Date.Time = '930218.130008'
Model change Date.Time  = ''
Author                  = 'NORTHROP B2 ITDS CTB'
Department              = ''
Product name from sender = '0101A.gef.igs'
Destination product name = '0101A.gef.igs'
```

*** Parameter Delimiters ***

```
Delimiter = ','
Terminator = ';'

```

*** Originating System Data ***

```
System ID           = 'ITDS CONVERTER: GEF_IGES'
Preprocessor version = '1.0'
Specification version = 6 (IGES 4.0)
```

*** Precision levels ***

```
Integer bits = 32
Floating point - Exponent = 38 Mantissa = 6
Double precision - Exponent = 308 Mantissa = 15
```

*** Global Model Data ***

Model scale = 1.0000E+00
Unit flag = 1
Units = 'IN'
Line weights = 1
Maximum line thickness = 6.300000E-03
Minimum line thickness = 6.300000E-03
CAUTION 2317: Maximum line thickness equal to minimum thickness.
Granularity = 1.000000E-03
Maximum coordinate = 7.243750E+00

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	1850
	Blanked	0
Independence:	Independent	1838
	Physically Subordinate	8
	Logically Subordinate	4
	Totally Subordinate	0
Entity use:	Geometry	1831
	Annotation	19
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	1850
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
-----	-----	-----	-----	-----
104	1	0	659	Conic arc - ellipse
106	63	0	8	Simple closed planar curve
110	0	0	497	Line
112	0	0	5	Parametric spline curve
124	0	0	659	Transformation matrix
212	0	0	9	General note

230	0	0	8	Sectioned area (Standard Crosshatching)
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
406	18	0	2	Property - Intercharacter spacing
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	1850

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled 1850

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
-	-	166	8	-	42	4	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	493	-	-	455	1	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
116	118	120	122	124	125	126	128	
-	-	-	-	659	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
130	132	134	136	138	140	142	144	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted

- - - - - User defined

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	1850	(0.0063)

*** Colors Used in Data ***

Defaulted	1784
Black	57
White	9

***** ENTITY ANALYSIS *****

*** Entity type: 104

WARNING 2265: Start point off conic by 1.190300E-03 at D 539.
WARNING 2039: End point off conic by 1.388423E-03 at D 743. WARNING 2265: Messages regarding invalid start point suppressed. WARNING 2039: Messages regarding conic end p suppressed.

*** Entity type: 106

*** Entity type: 110

-- 497 lines averaging 2.015512E-01 units --

*** Entity type: 112

*** Entity type: 124

659 transformation matrices, 659 non-zero translations.

NOTE 2341: 659 matrices contain translation information.

*** Entity type: 212

9 text strings in data file.
Average text aspect ratio in file is 0.9883842.
Minimum text aspect ratio in file is 0.9821430.
Maximum text aspect ratio in file is 0.9910715.

FONTS USED IN FILE

FONT	COUNT	NAME
1	9	Default ASCII Style

*** Entity type: 230

*** Entity type: 404

Drawing at D 5 contains 1 views.
Drawing at D 5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

Scale of view at D 1 is 1.000000E+00.
Orthographic View entity at D 1 has 0 clipping planes specified.
XMIN = Not Set XMAX = Not Set
YMIN = Not Set YMAX = Not Set
ZMIN = Not Set ZMAX = Not Set

*** Message Summary ***

2015: 98 Mathematically incorrect definitions.
2018: 1 Problems with line weight/width display information.

*** Error Summary ***

0 fatal errors
0 severe errors
0 errors
98 warnings
1 cautions
0 nitpicks
1 notes

*** End of Analysis of /novell/9330/q004.igs ***

10.1.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

File: I:/9330/Q004.xli

Date: Tue, Apr 13, 1993

Time: 09:51:28

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750

Translating from IGES file: I:/9330/Q004.IGS
to AutoCAD Drawing: C:\Q004.dwg

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01

Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin

5

DOT

acad.lin

=====

Parse phase

*** Warning (IEVM_BAD_VECTOR_124) ***

(DE 493, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

*** Warning (IEVM_BAD_START_POINT_104) ***

(DE 495, TF 104:1) Entity's start point not on the conic. Value found was
1.2643260e-002, 6.7795300e-003.

Action taken: Start point moved 1.5608861e-003 units, from 1.2643260e-002,
6.7795300e-003 to 1.4204146e-002, 6.7795300e-003.

<<<< PART OF LOG REMOVED HERE >>>>

*** Warning (IEVM_BAD_VECTOR_124) ***

(DE 589, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

=====

Start Section:

CONFORMANCE:

MIL-D-28000 Amendment1, 20 December 1988
Technical Illustration Class I Subset

ILLUSTRATION IDENTIFIER:

0101A.gef.igs

Global Section:

Parameter Delimiter: ,
Record Delimiter: ;
Sending Product ID: 0101A.gef.igs
File Name: 0101A.gef.igs
System ID: ITDS CONVERTER: GEF_IGES
Preprocessor Version: 1.0
Size of Integer: 32
Sgl. Precision Mag: 38
Sgl. Precision Sig: 6
Dbl. Precision Mag: 308

Dbl. Precision Sig: 15
Receiving Product ID: 0101A.gef.igs
Model Space Scale: 1.000000
Unit Flag: 1
Unit String: IN
of Line Weights: 1
Maximum Line Width: 0.006300
Creation Date: 02/18/93 13:00:08
Minimum Resolution: 0.001000
Maximum Coordinate: 7.243750
Author: NORTHROP B2 ITDS CTB
Organization:
IGES Version Number: 6
Drafting Standard: 0

Entity Summary:

Type	Form	Description	Count
104	1	Ellipse	659
106	63	Simple Closed Planar Curve	8
110	0	Line	497
112	0	Parametric Spline Curve	5
124	0	Transformation Matrix	659
212	0	General Note (Simple)	9
230	0	Section Area (Standard Fill)	8
404	0	Drawing (form 0)	1
406	16	Property (Drawing Size)	1
406	18	Property (Int-character Spacing)	2
410	0	View	1
Total			1850

Translation phase

Drawing Entity (404 Form 0) at DE 5, with

name = ,
size = 3.937500, 6.300000,
units = IN,

was processed in the AutoCAD drawing file: C:\Q004.dwg

*** Warning (ACAD_NEW_VIEW_VOLUME_GENERATED) ***

(DE: 1 TF: 410:0)

A new view volume has been generated for the view with:

XMIN (-4.641649), XMAX (0.401133),
YMIN (0.456990), YMAX (7.663985),

ZMIN (-0.688634), ZMAX (0.688634).

IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
104	1	Ellipse	659	659	0
106	63	Simple Closed Planar Curve	9	9	0
110	0	Line	497	497	0
112	0	Parametric Spline Curve	5	5	0
212	0	General Note (Simple)	9	9	0
230	0	Section Area (Standard Fill)	8	8	0
404	0	Drawing (form 0)	1	1	0
406	16	Property (Drawing Size)	1	1	0
410	0	View	1	1	0
Totals			1190	1190	0

Unsupported IGES Entity Summary

Type	Form	Description	Count
406	18	Property (Int-character Spacing)	2
Total			2

AutoCAD Entity Summary

Entity	Created	Errors
LINE	953	0
Text	9	0
SOLID	7	0
INSERT	1	0
POLYLINE	210	0
BLOCK	1	0
Totals	1181	0

Error Summary:

The following message was issued 659 time(s)
Entity's start point not on the conic. Value found was %.7e, %.7e.

The following message was issued 658 time(s)
Entity's End Point not on the conic. Value found was %.7e, %.7e.

The following message was issued 610 time(s)
Entity has a column which is not a unit vector.

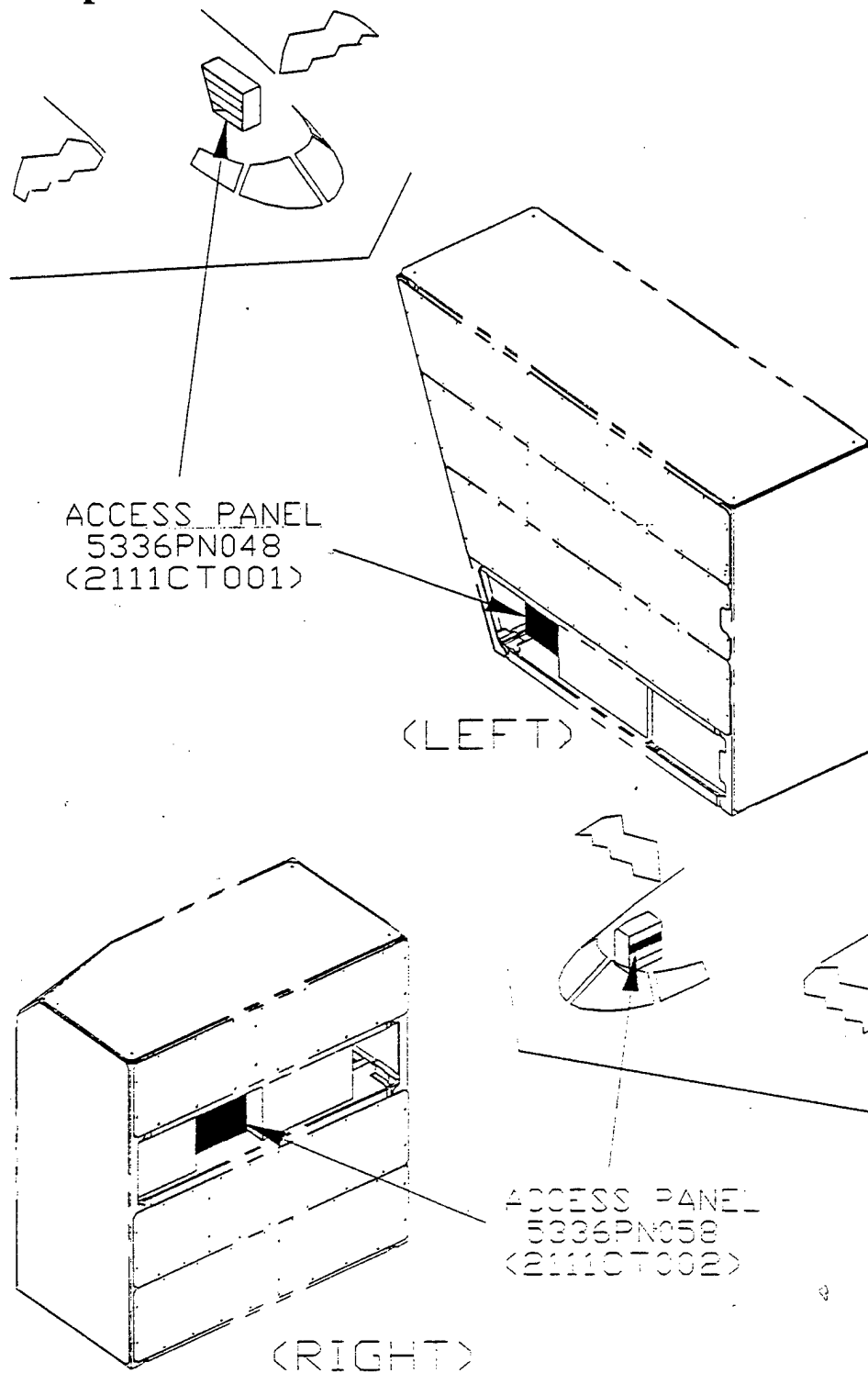
The following message was issued 1 time(s)
A new view volume has been generated for the view with:
XMIN (%lf), XMAX (%lf),
YMIN (%lf), YMAX (%lf),
ZMIN (%lf), ZMAX (%lf).

Status: 0
Warning: 1928
Error: 0
Fatal: 0

Elapsed Time:

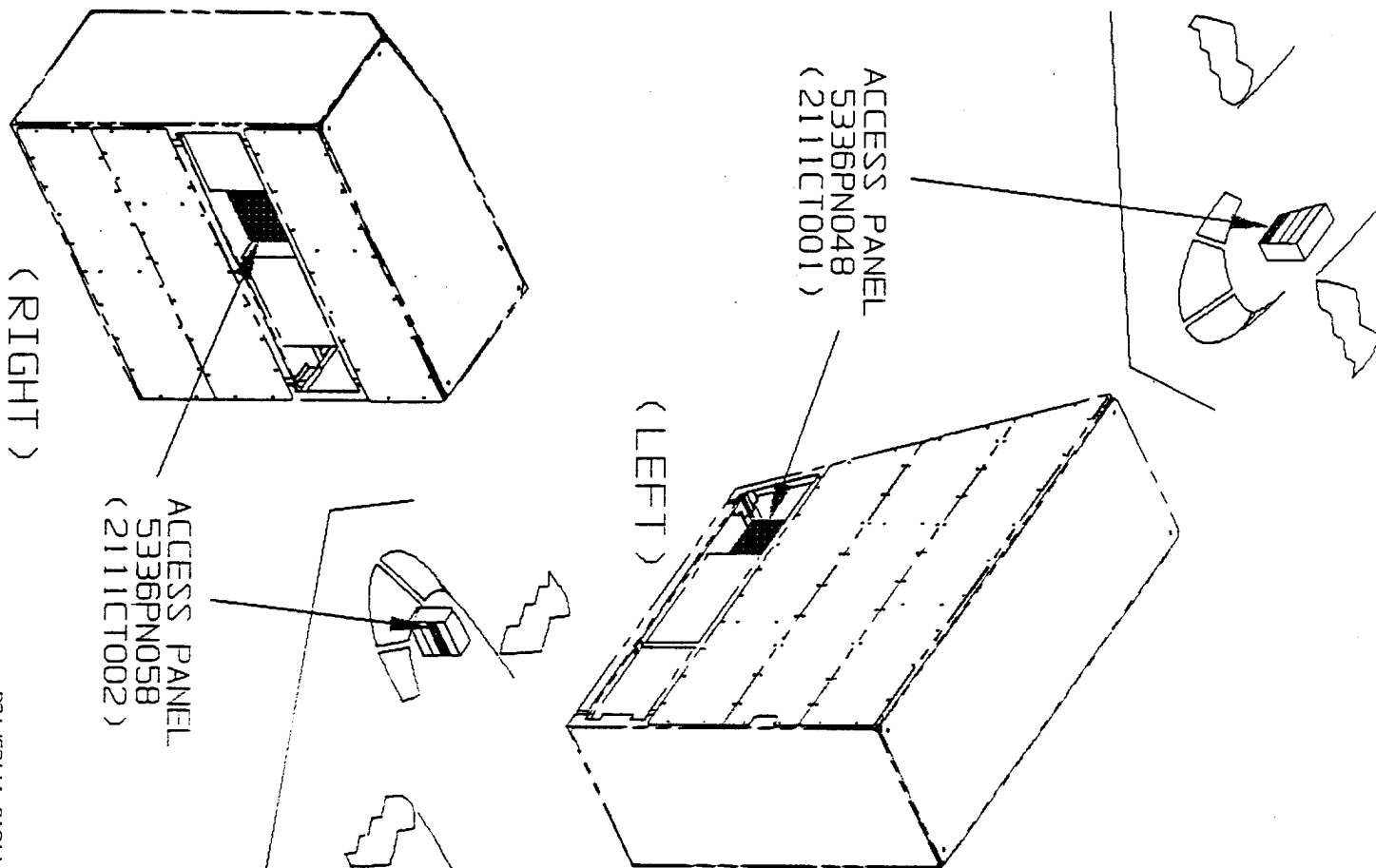
Processor: 00:01:09
Clock: 00:01:09
=====

10.1.3 Output AutoCAD R12



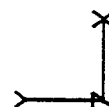
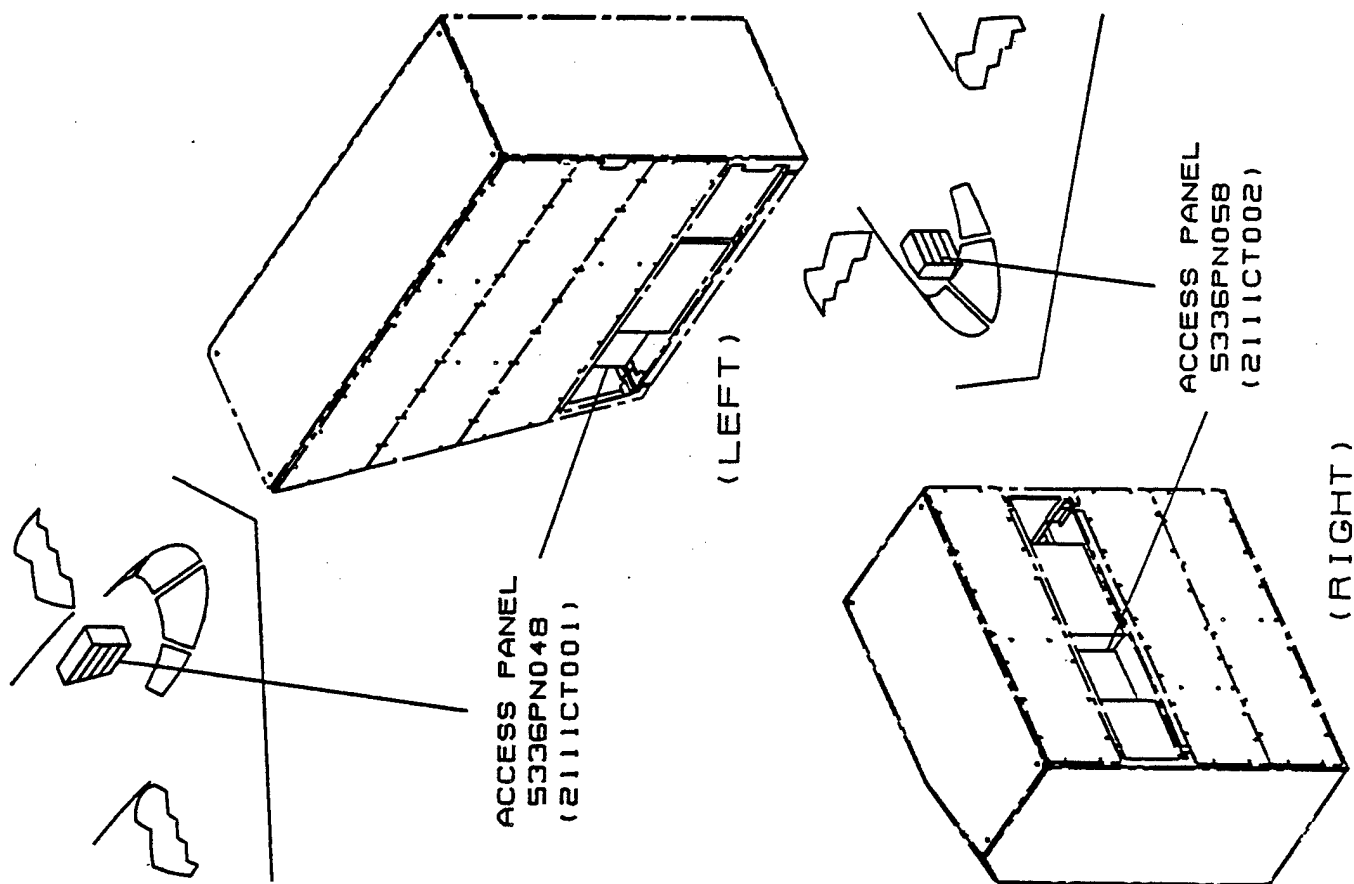
B2AJG2111-0101A

10.1.4 Output Cadkey v5.02

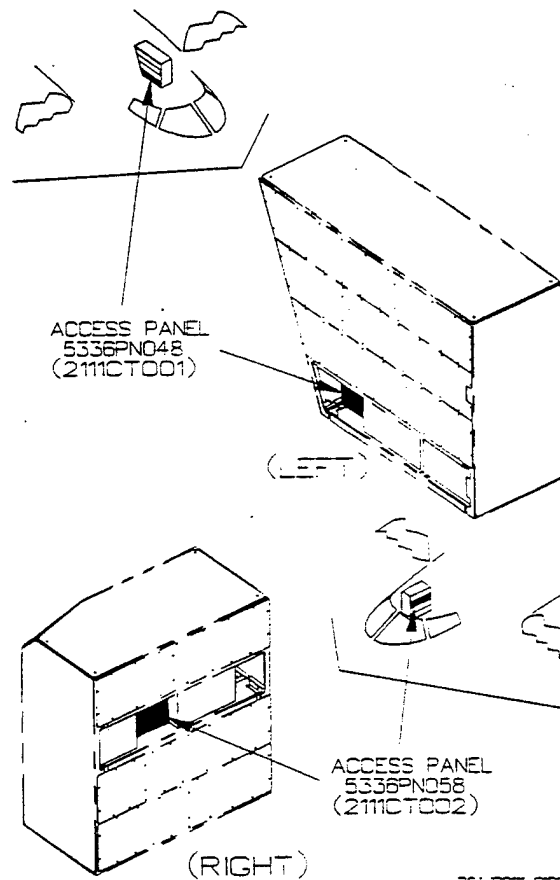


B2AJG2111-0101A

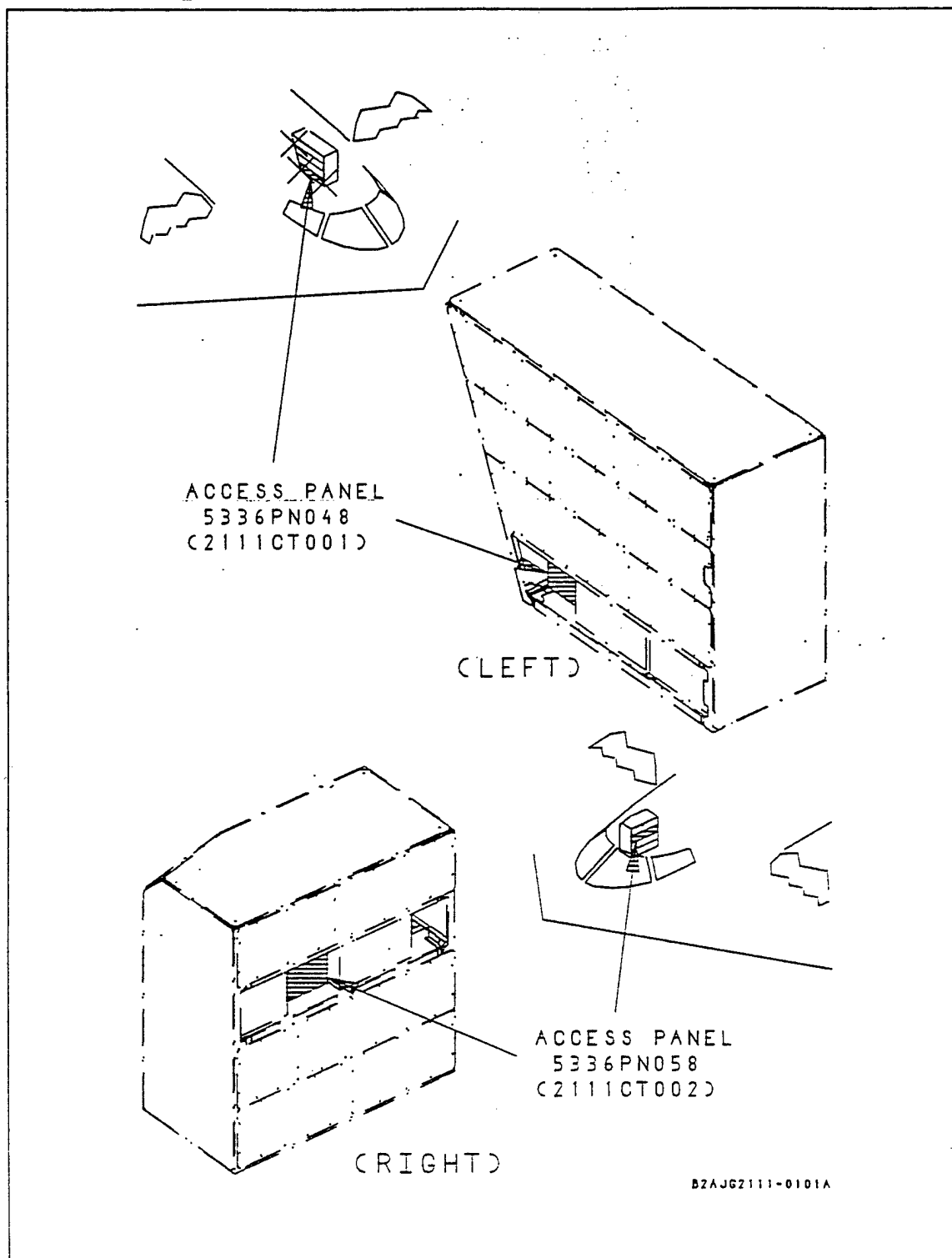
10.1.5 Output CheckMark v1.00



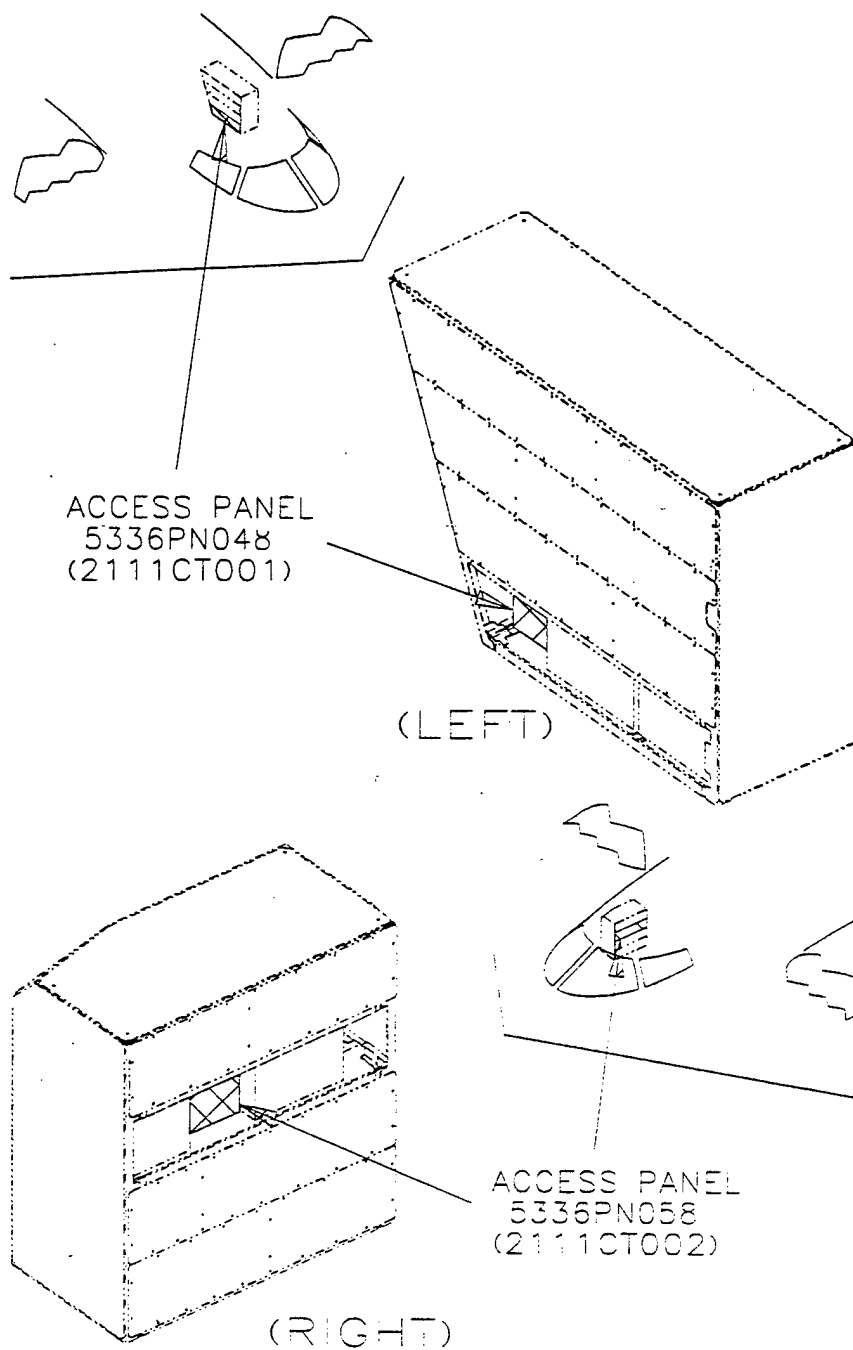
10.1.6 Output IGESView



10.1.7 Output IGESWorks



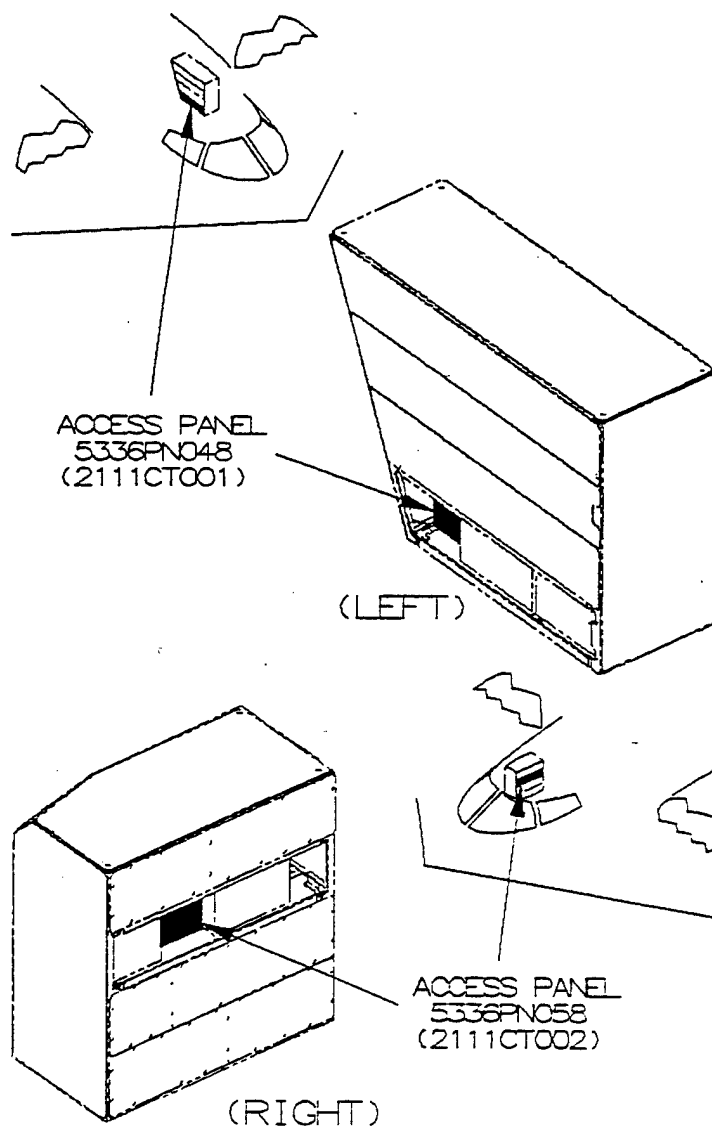
10.1.8 Output Preview



B2AJG2111-0101A

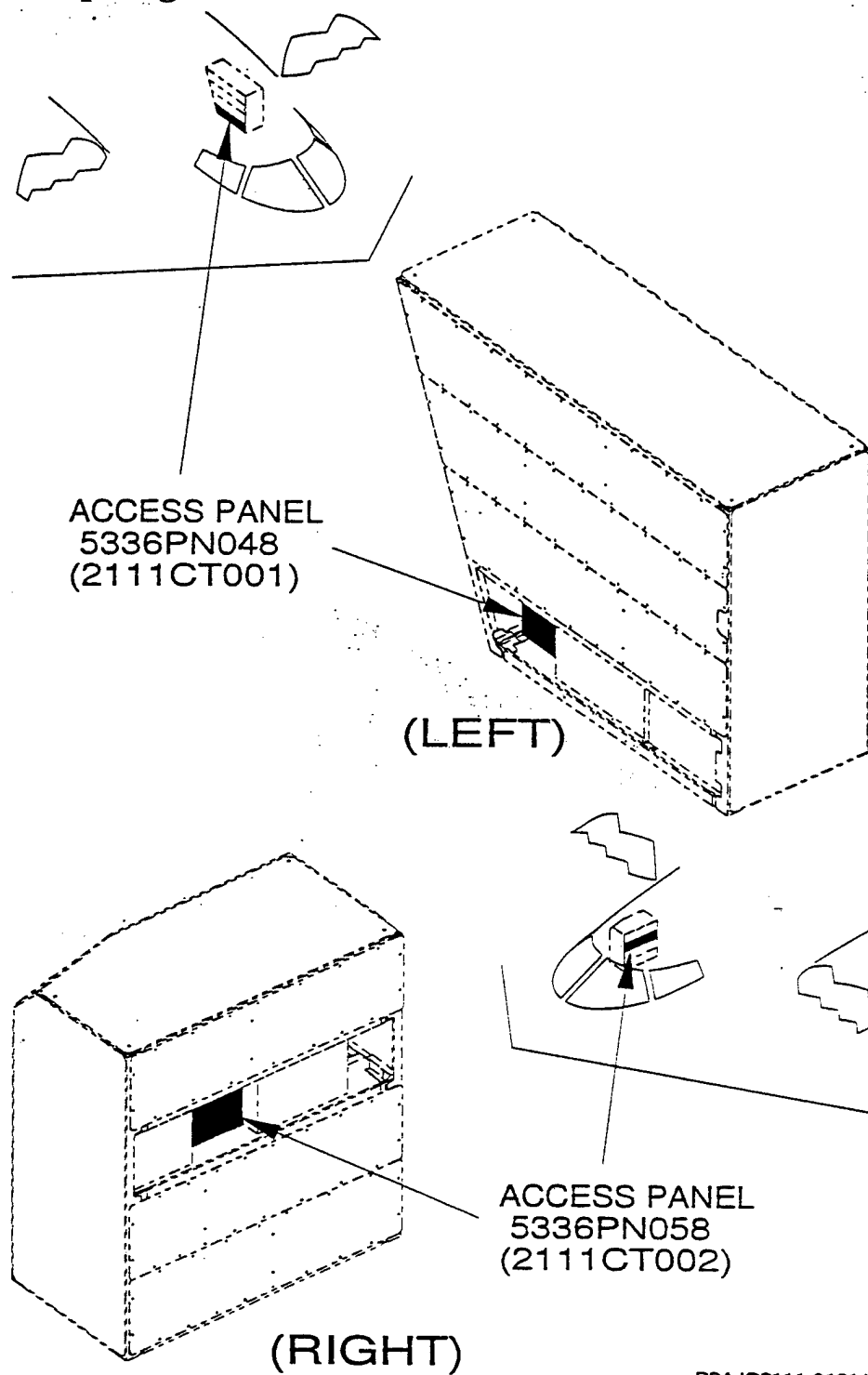
10.1.9 Output Wiz Worx

Q004



B2AJG2111-0101A

10.1.10 Output iges2draw/IslandDraw



B2AJG2111-0101A

10.2 File D001Q007

10.2.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***  
***      MARCH 1992      ***  
***   IGES Data Analysis   ***  
***   (708) 449-3430      ***
```

Input file is /novell/9330/q007.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is April 13, 1993 9:11 AM

*** File and Product Name Information ***

```
File name from sender   = '0110B.gef.igs'  
File creation Date.Time = '930218.130543'  
Model change Date.Time  = ''  
Author                  = 'NORTHROP B2 ITDS CTB'  
Department              = ''  
Product name from sender = '0110B.gef.igs'  
Destination product name = '0110B.gef.igs'
```

*** Parameter Delimiters ***

```
Delimiter = ','  
Terminator = ';' 
```

*** Originating System Data ***

```
System ID           = 'ITDS CONVERTER: GEF_IGES'  
Preprocessor version = '1.0'  
Specification version = 6 (IGES 4.0)
```

*** Precision levels ***

```
Integer bits = 32  
Floating point - Exponent = 38  Mantissa = 6  
Double precision - Exponent = 308  Mantissa = 15
```

*** Global Model Data ***

```
Model scale          = 1.0000E+00  
Unit flag            = 1
```

Units = 'IN'
 Line weights = 1
 Maximum line thickness = 6.300000E-03
 Minimum line thickness = 6.300000E-03
 CAUTION 2317: Maximum line thickness equal to minimum thickness.
 Granularity = 1.000000E-03
 Maximum coordinate = 7.243750E+00

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	1433
	Blanked	0
Independence:	Independent	1423
	Physically Subordinate	6
	Logically Subordinate	4
	Totally Subordinate	0
Entity use:	Geometry	1417
	Annotation	16
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	1433
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
-----	----	-----	-----	----
100	0	0	11	Circular arc
104	1	0	266	Conic arc - ellipse
106	63	0	6	Simple closed planar curve
110	0	0	676	Line
112	0	0	189	Parametric spline curve
124	0	0	266	Transformation matrix
212	0	0	8	General note
230	0	0	6	Sectioned area (Standard Crosshatching)
404	0	0	1	Drawing

406	16	0	1	Property - Drawing size
406	18	0	2	Property - Intercharacter spacing
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	1433

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled 1433

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
11	-	252	6	-	600	189	-	Solid
-	-	1	-	-	19	-	-	Dashed
-	-	13	-	-	50	-	-	Phantom
-	-	-	-	-	7	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
116	118	120	122	124	125	126	128	
-	-	-	-	266	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
130	132	134	136	138	140	142	144	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	1433	(0.0063)

*** Colors Used in Data ***

Defaulted	647
Black	778
White	8

***** ENTITY ANALYSIS *****

*** Entity type: 100

*** Entity type: 104

WARNING 2265: Start point off conic by 4.023317E-03 at D 955.
WARNING 2039: End point off conic by 4.023317E-03 at D 955.
WARNING 2265: Messages regarding invalid start point suppressed.
WARNING 2039: Messages regarding conic end points suppressed.

*** Entity type: 106

*** Entity type: 110

-- 676 lines averaging 1.380248E-01 units --

*** Entity type: 112

WARNING 2238: Polynomial segment (0) at D 1351 is degenerate.
WARNING 2238: Polynomial segment (1) at D 1421 is degenerate.
WARNING 2238: Polynomial segment (0) at D 1467 is degenerate.
WARNING 2238: Polynomial segment (1) at D 1567 is degenerate.
WARNING 2238: Polynomial segment (0) at D 1627 is degenerate.

*** Entity type: 124

266 transformation matrices, 266 non-zero translations.
NOTE 2341: 266 matrices contain translation information.

*** Entity type: 212

8 text strings in data file.

Average text aspect ratio in file is 0.9635382.
Minimum text aspect ratio in file is 0.8928572.
Maximum text aspect ratio in file is 0.9923470.

FONTS USED IN FILE

FONT	COUNT	NAME
1	8	Default ASCII Style

*** Entity type: 230

*** Entity type: 404

Drawing at D 5 contains 1 views.
Drawing at D 5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

Scale of view at D 1 is 1.000000E+00.
Orthographic View entity at D 1 has 0 clipping planes specified.
XMIN = Not Set XMAX = Not Set
YMIN = Not Set YMAX = Not Set
ZMIN = Not Set ZMAX = Not Set

*** Message Summary ***

2015: 39 Mathematically incorrect definitions.
2018: 1 Problems with line weight/width display information.

*** Error Summary ***

0 fatal errors
0 severe errors
0 errors
39 warnings
1 cautions
0 nitpicks
1 notes

*** End of Analysis of /novell/9330/q007.igs ***

10.2.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

=====
File: I:/9330/Q007.xli

Date: Tue, Apr 13, 1993

Time: 09:54:38
=====

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750

Translating from IGES file: I:/9330/Q007.IGS
to AutoCAD Drawing: C:\Q007.dwg
=====

Options obtained from: default settings

Curves Approximated to Tolerance of 0.01

Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin

5

DOT

acad.lin

=====

Parse phase

*** Warning (IEVM_RADII_NOT_EQUAL_100) ***

(DE 895, TF 100:0) Entity's radii are not equal. Start point radius:
2.8024447e-003. Terminate point radius: 3.3702065e-003.

Action taken: Start point moved 2.8388087e-004 units from -2.5695066e+000,
5.6756716e+000 to -2.5697890e+000, 5.6756419e+000. Terminate point moved
2.8388087e-004 units from -2.5668151e+000, 5.6725955e+000 to -2.5668071e+000,
5.6728793e+000.

*** Warning (IEVM_BAD_VECTOR_124) ***

(DE 897, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

<<<< PART OF LOG REMOVED HERE >>>>

*** Warning (IEVM_BAD_CONTINUITY_112) ***

(DE 1329, TF 112:0) Entity's Degree of Continuity, 0, is incorrectly specified.
Degree of Continuity calculated to be 2.

Action taken: Degree of Continuity set to 2.

<<<< PART OF LOG REMOVED HERE >>>>

*** Warning (IEVM_RADII_NOT_EQUAL_100) ***

(DE 2233, TF 100:0) Entity's radii are not equal. Start point radius:
1.5103175e-002. Terminate point radius: 1.5428022e-002.

Action taken: Start point moved 1.6242327e-004 units from -2.1480713e+000,
3.7761354e+000 to -2.1479120e+000, 3.7761672e+000. Terminate point moved
1.6242327e-004 units from -2.1772947e+000, 3.7676759e+000 to -2.1771430e+000,
3.7677338e+000.

=====

Start Section:

CONFORMANCE:

MIL-D-28000 Amendment1, 20 December 1988
Technical Illustration Class I Subset

ILLUSTRATION IDENTIFIER:

0110B.gef.igs

Global Section:

Parameter Delimiter: ,
Record Delimiter: ;
Sending Product ID: 0110B.gef.igs
File Name: 0110B.gef.igs
System ID: ITDS CONVERTER: GEF_IGES
Preprocessor Version: 1.0
Size of Integer: 32
Sgl. Precision Mag: 38
Sgl. Precision Sig: 6
Dbl. Precision Mag: 308
Dbl. Precision Sig: 15
Receiving Product ID: 0110B.gef.igs
Model Space Scale: 1.000000
Unit Flag: 1
Unit String: IN
of Line Weights: 1
Maximum Line Width: 0.006300
Creation Date: 02/18/93 13:05:43
Minimum Resolution: 0.001000
Maximum Coordinate: 7.243750
Author: NORTHROP B2 ITDS CTB
Organization:
IGES Version Number: 6
Drafting Standard: 0

Entity Summary:

Type	Form	Description	Count
100	0	Circular Arc	11
104	1	Ellipse	266
106	63	Simple Closed Planar Curve	6
110	0	Line	676
112	0	Parametric Spline Curve	189
124	0	Transformation Matrix	266
212	0	General Note (Simple)	8
230	0	Section Area (Standard Fill)	6
404	0	Drawing (form 0)	1
406	16	Property (Drawing Size)	1
406	18	Property (Int-character Spacing)	2
410	0	View	1

Total 1433

Translation phase

Drawing Entity (404 Form 0) at DE 5, with

name = ,
size = 3.937500, 6.300000,
units = IN,

was processed in the AutoCAD drawing file: C:\Q007.dwg

*** Warning (ACAD_NEW_VIEW_VOLUME_GENERATED) ***

(DE: 1 TF: 410:0)

A new view volume has been generated for the view with:

XMIN (-4.657909), XMAX (0.396758),
YMIN (0.451881), YMAX (7.728314),
ZMIN (-0.693743), ZMAX (0.693743).

IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
100	0	Circular Arc	11	11	0
104	1	Ellipse	266	266	0
106	63	Simple Closed Planar Curve	7	7	0
110	0	Line	676	676	0
112	0	Parametric Spline Curve	189	189	0
212	0	General Note (Simple)	8	8	0
230	0	Section Area (Standard Fill)	6	6	0
404	0	Drawing (form 0)	1	1	0
406	16	Property (Drawing Size)	1	1	0
410	0	View	1	1	0
Totals			1166	1166	0

Unsupported IGES Entity Summary

Type	Form	Description	Count
406	18	Property (Int-character Spacing)	2
Total			2

AutoCAD Entity Summary

Entity	Created	Errors
--------	---------	--------

=====	=====	=====
LINE	858	0
Text	8	0
ARC	11	0
SOLID	5	0
INSERT	1	0
POLYLINE	287	0
BLOCK	1	0

Totals	=====	=====
	1171	0

=====

Error Summary:

The following message was issued 11 time(s)
Entity's radii are not equal. Start point radius: %.7e. Terminate point
radius: %.7e.

The following message was issued 265 time(s)
Entity's start point not on the conic. Value found was %.7e, %.7e.

The following message was issued 265 time(s)
Entity's End Point not on the conic. Value found was %.7e, %.7e.

The following message was issued 161 time(s)
Entity's Degree of Continuity, %d, is incorrectly specified. Degree of
Continuity calculated to be %d.

The following message was issued 261 time(s)
Entity has a column which is not a unit vector.

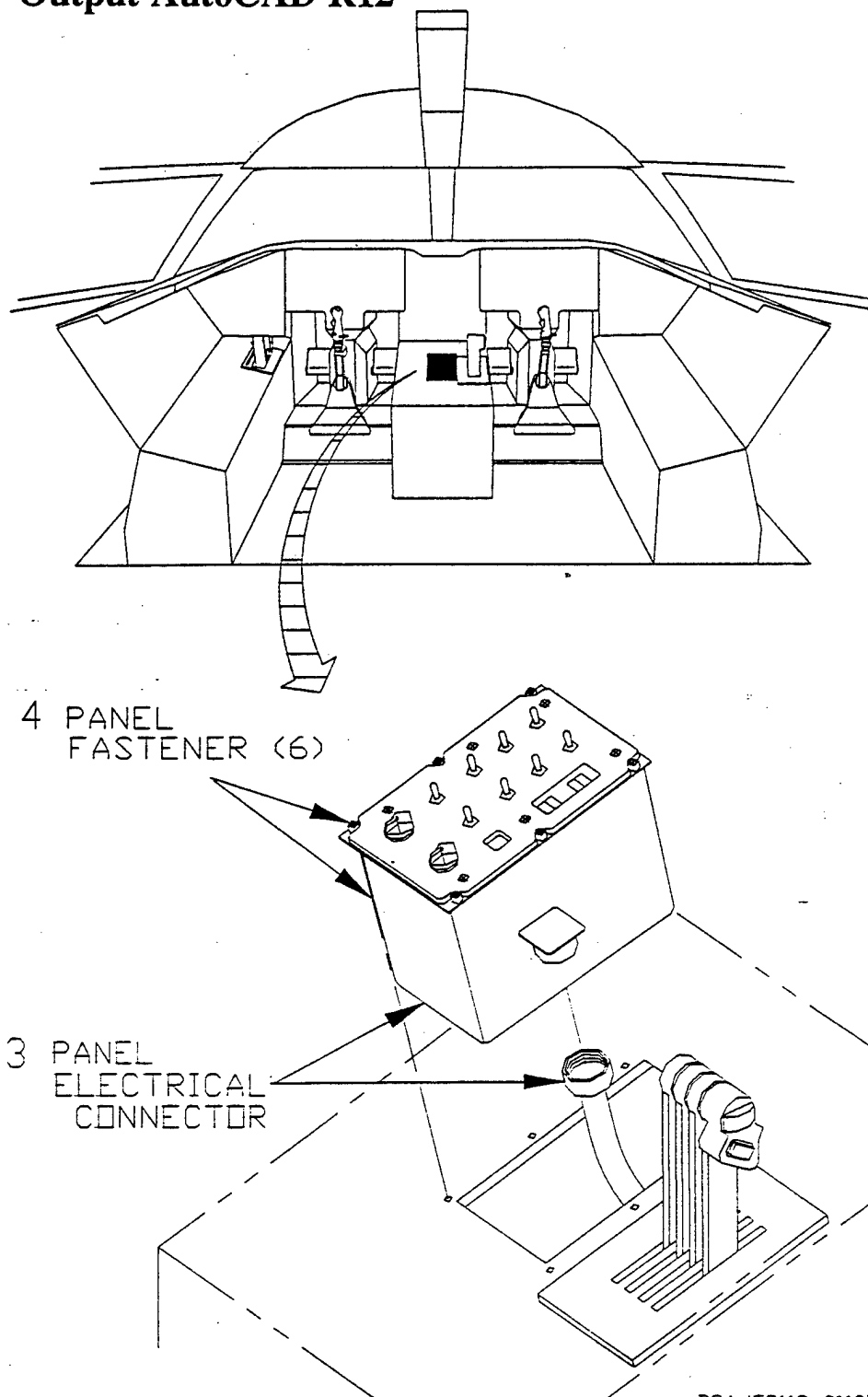
The following message was issued 1 time(s)
A new view volume has been generated for the view with:
XMIN (%lf), XMAX (%lf),
YMIN (%lf), YMAX (%lf),
ZMIN (%lf), ZMAX (%lf).

Status: 0
Warning: 964
Error: 0
Fatal: 0

Elapsed Time:

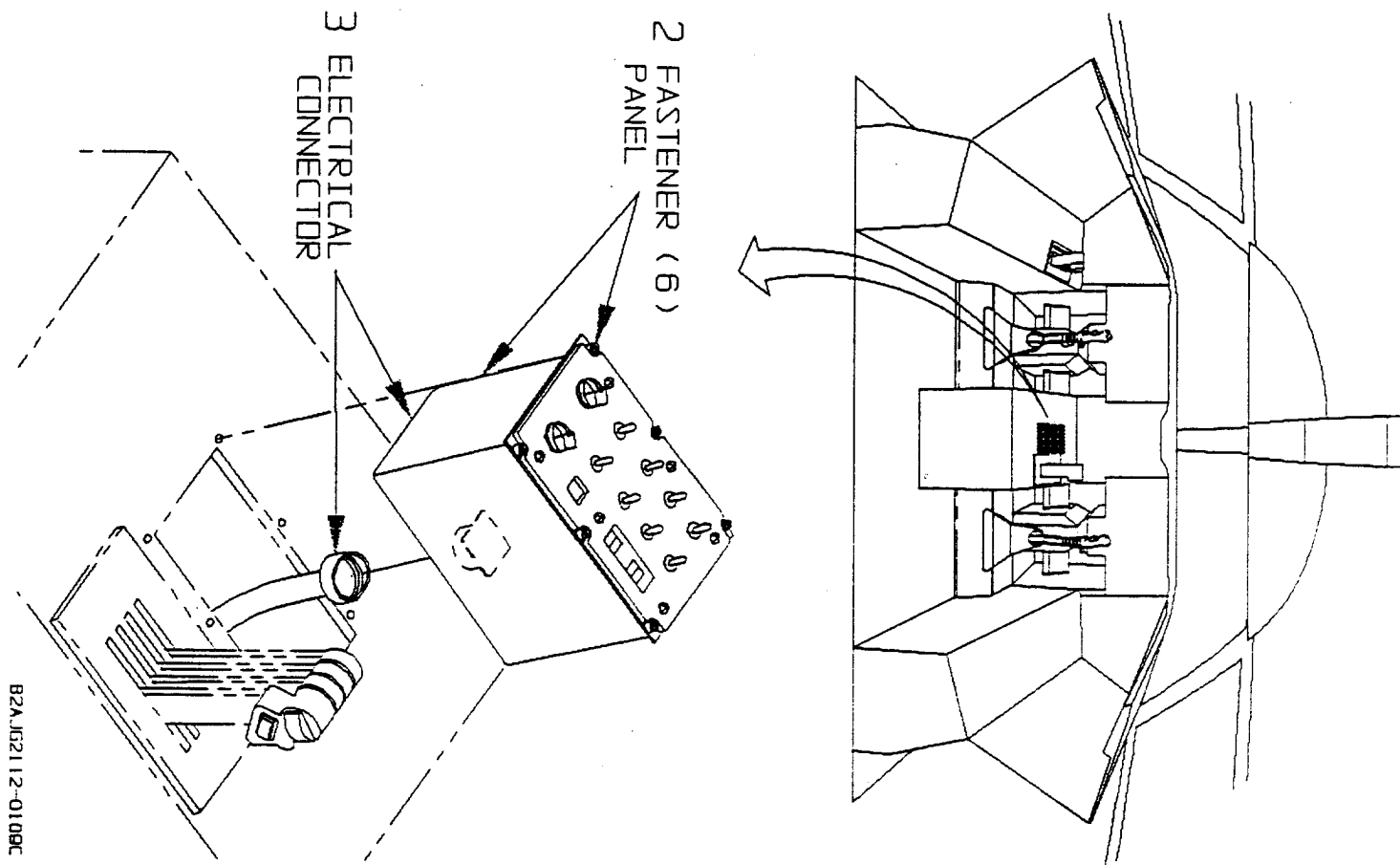
Processor: 00:01:01
Clock: 00:01:01

10.2.3 Output AutoCAD R12

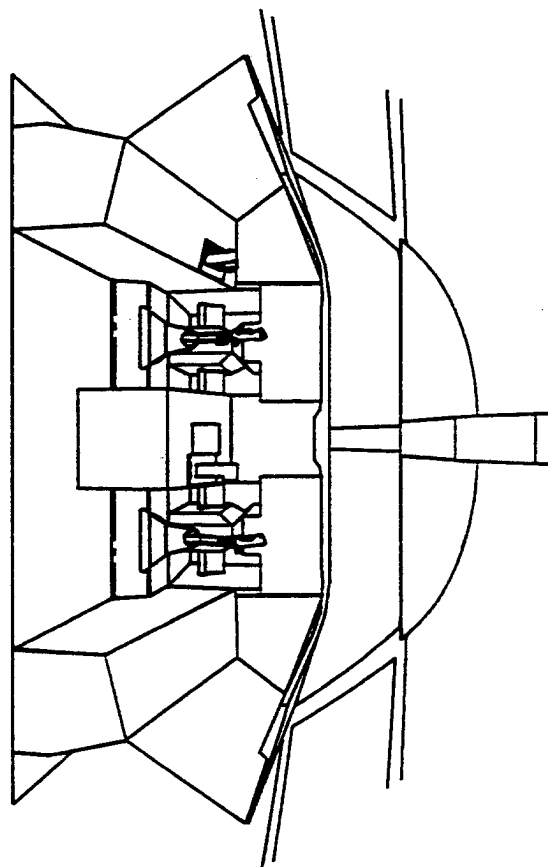
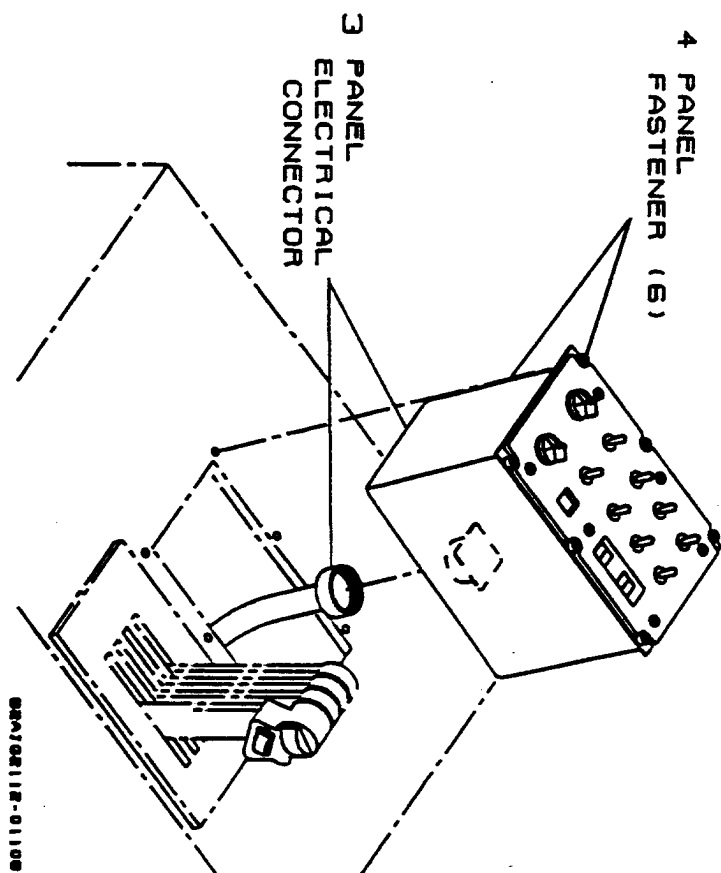
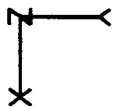


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10.2.4 Output Cadkey v5.02

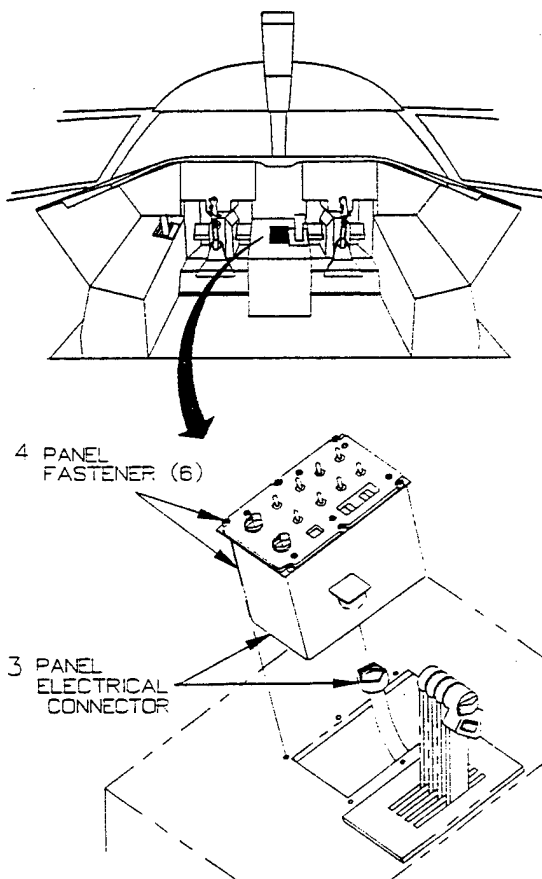


10.2.5 Output CheckMark v1.00

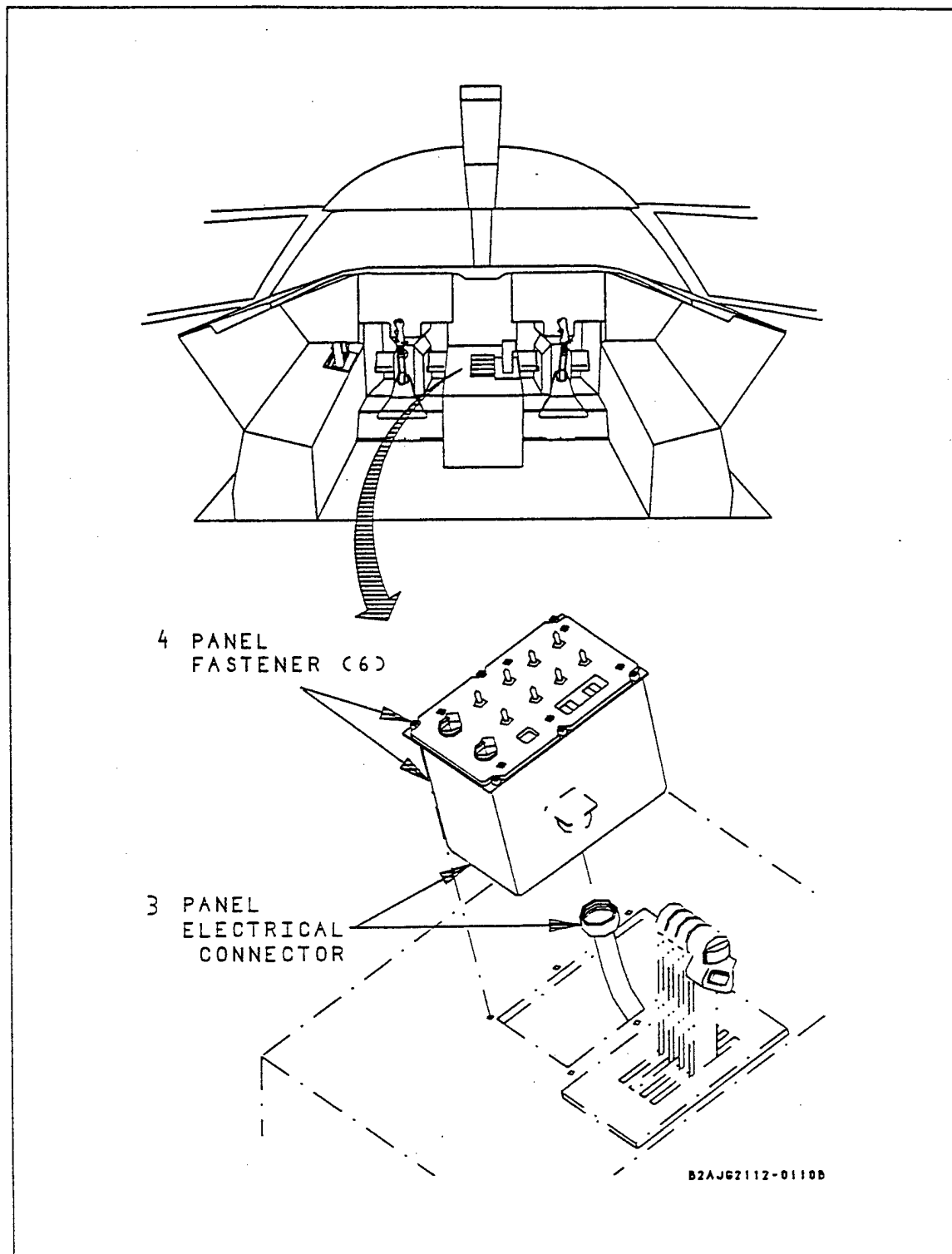


94-005-0100

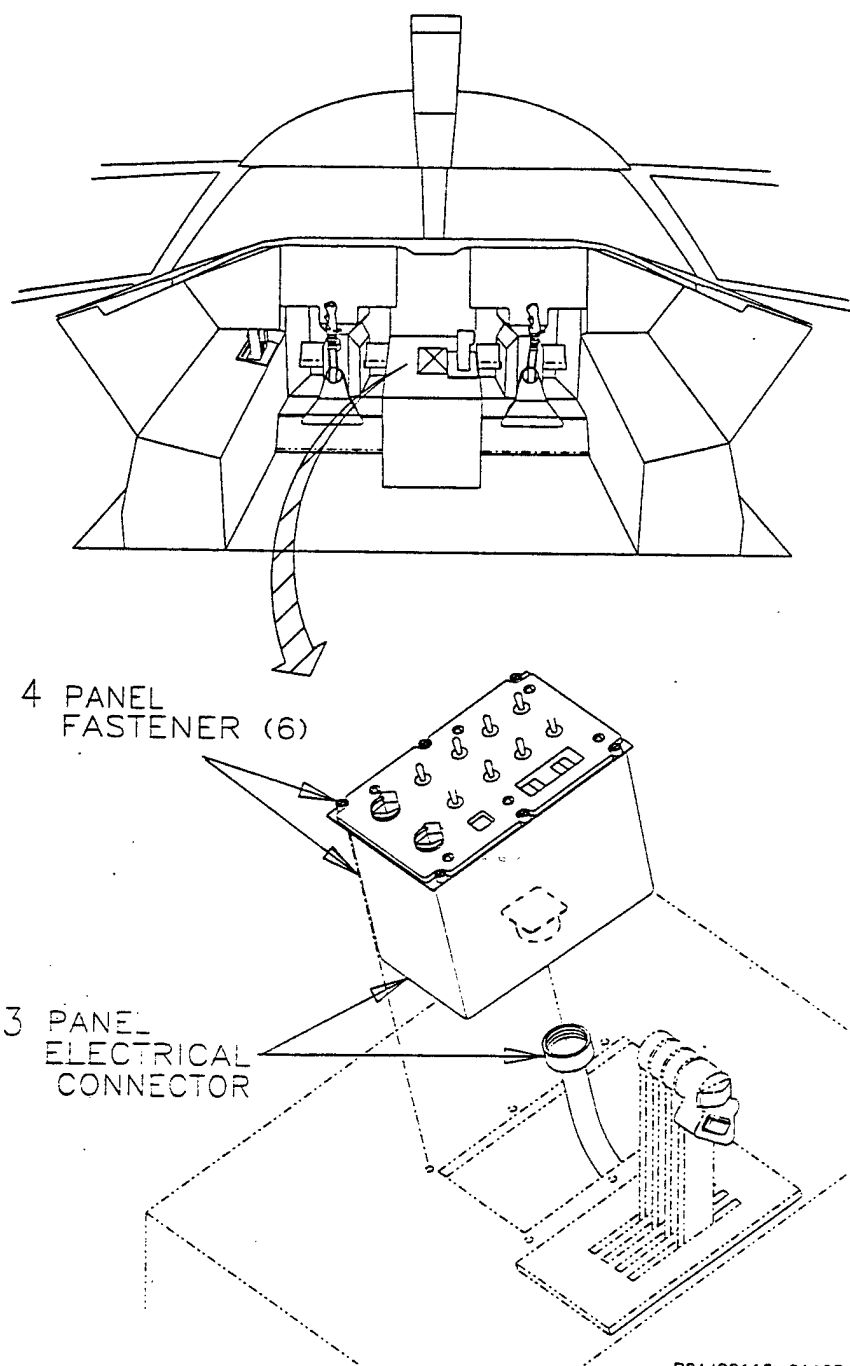
10.2.6 Output IGESView



10.2.7 Output IGESWorks



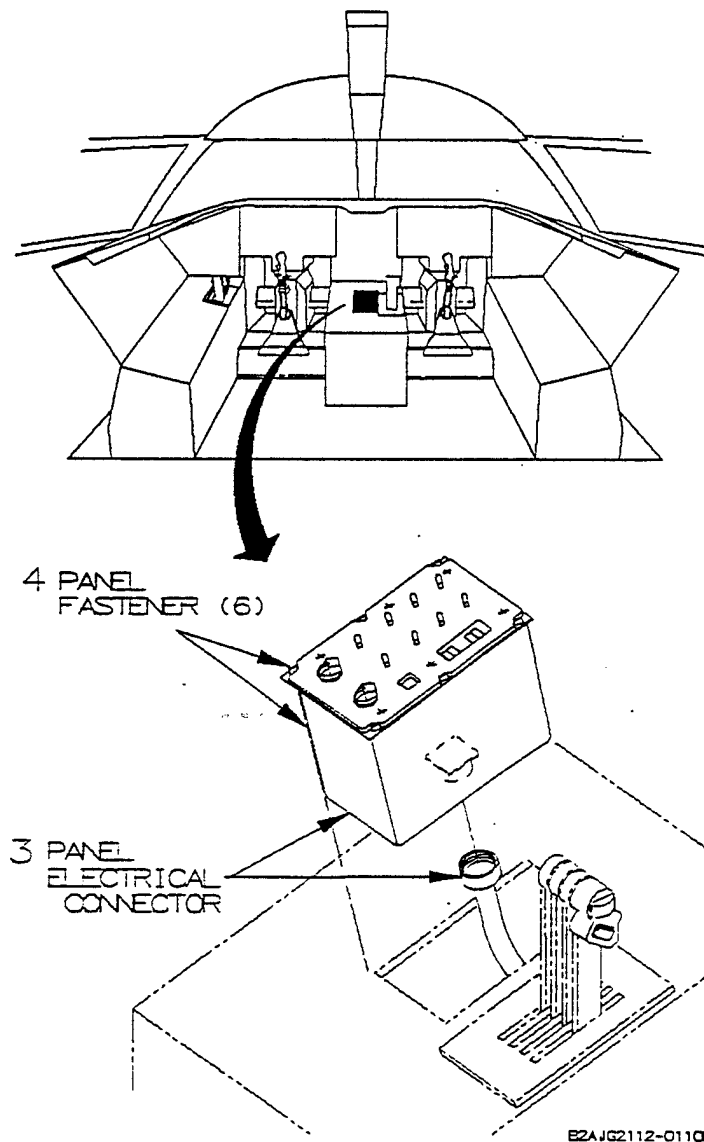
10.2.8 Output Preview



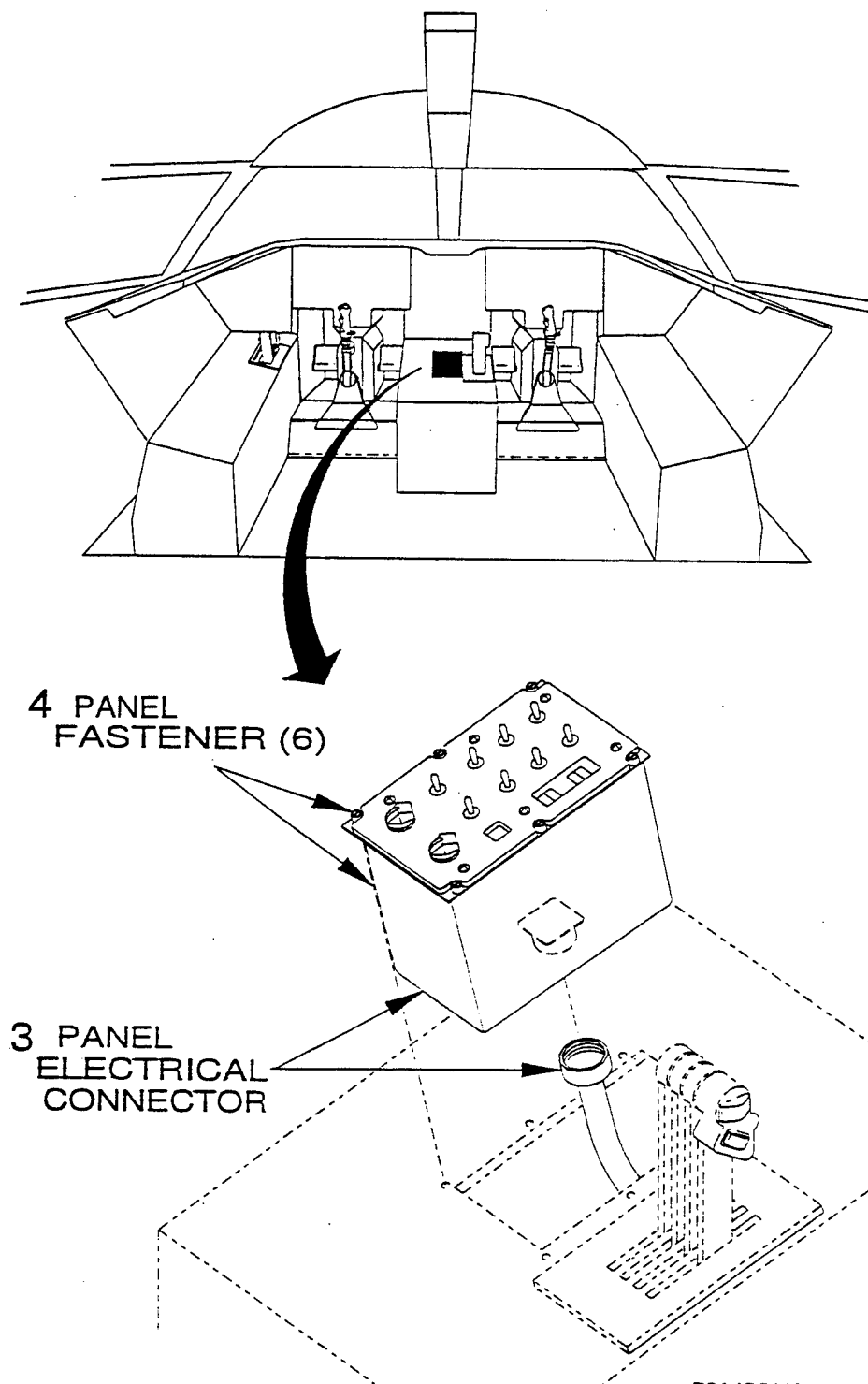
B2AJG2112-0110B

10.2.9 Output Wiz Worx

Q007



10.2.10 Output iges2draw/IslandDraw



B2AJG2112-0110B

11. Appendix C - Detailed SGML Analysis

11.1 Datalogics Parser Log

SGML Document Type Definition Parser
Version 3.36
Copyright (c) Datalogics 1988, 1989, 1990, 1991
An SGML System Conforming to
International Standard ISO 8879
Standard Generalized Markup Language

Log file: '9330.LOG'
SDO File: 'ctndekl.sdo'
Namecase General is yes.
Namecase Entity is no.
Parsing DTD file: '9330.dtd'

This DTD conforms to the ISO 8879 standard

DTO file '9330.DTO' created

closing statistics:
Capacity points: 27328
Bytes of DTO file string space: 7895
SGML descriptor blocks: 2983

Document Type Definition is compliant and parsed normally.

Program status code: 0.

11.2 Exoterica XGMLNormalizer Parser

No reported errors.

11.3 Exotercia Validator

```
<!-- Entity has no name, system id or public id in formal file -->.
<!-- **Warning**:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "ENTRY".
  (((#PCDATA|xref|change|emphasis|hcp|hci|ocp|
  ^^^^^^
-->
<!-- **Warning**:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "NOTICE".
  (((#PCDATA|xref|change|emphasis|hcp|hci|ocp|
  ^^^^^^
-->
<!-- **Warning** in "9330.sgm", line 418:
  An element with mixed content should permit data characters ("PCDATA")
  everywhere.
  The element being declared is "RESULT".
  <!ELEMENT result      - o (%text; ,faultcode?)>
                                     /\
-->
<!-- **Warning** in "9330.sgm", line 1151:
  There is no element with an IDREF or IDREFS attribute value equal to a
  specified ID value.
  The unreferenced ID attribute value is "TOC".
-->
<!-- 4 warnings reported. -->
```

11.4 Sema Mark-it Log

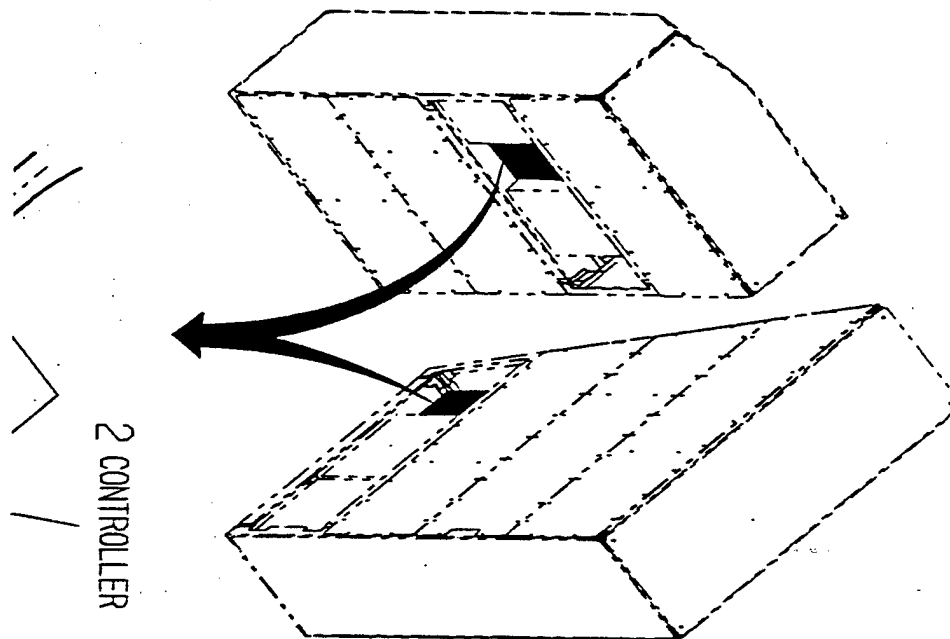
No reported errors.

11.5 Public Domain sgmls Log

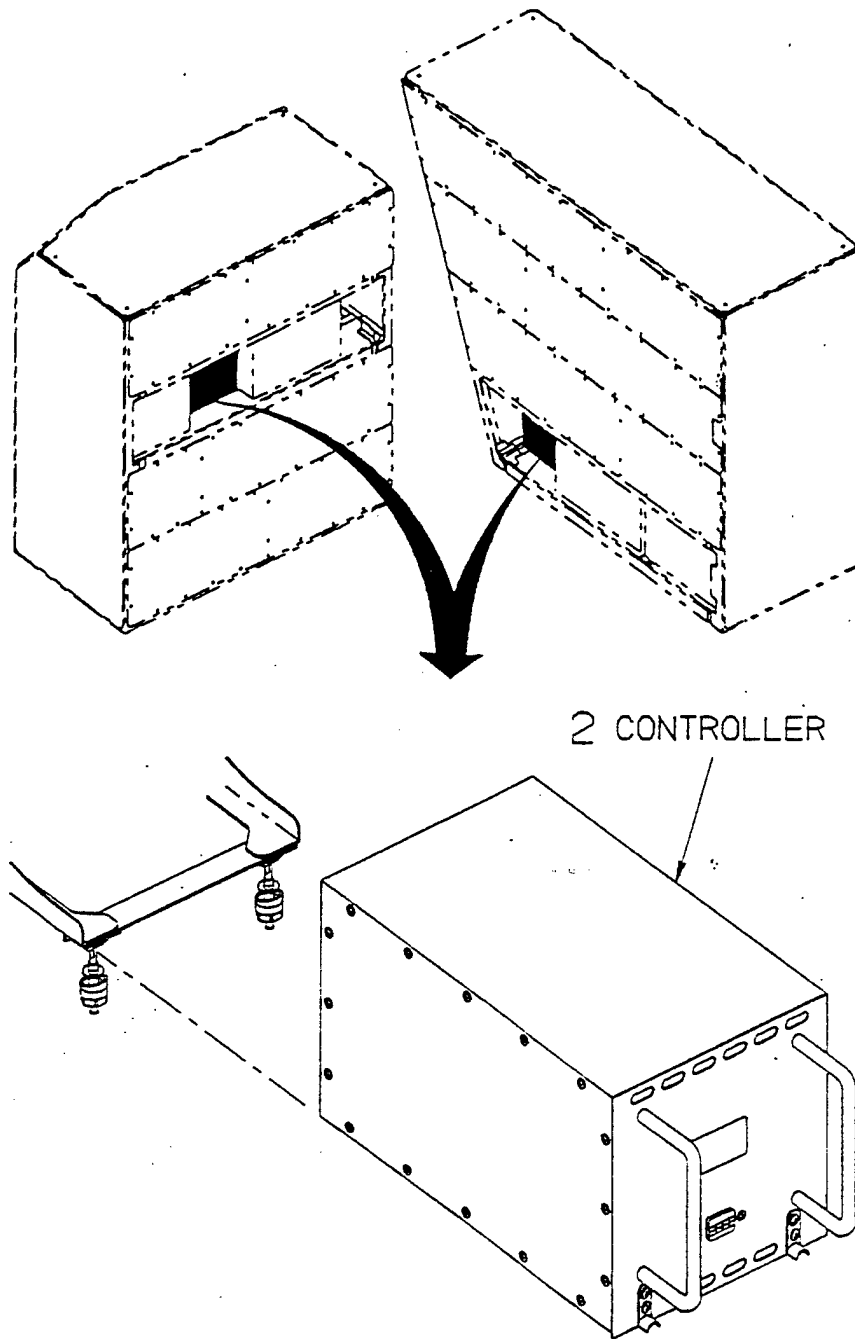
TOTALCAP 51509/200000
ENTCAP 7648/200000
ENTCHCAP 3873/200000
ELEMCA 3456/200000
GRPCAP 20320/200000
EXGRPCAP 256/200000
EXNMCA 544/200000
ATTCAP 10720/200000
ATTCHCAP 296/200000
AVGRPCAP 3840/200000
NOTCAP 192/200000
NOTCHCAP 364/200000

12. Appendix D - Detailed Raster Analysis

12.1 Output HiJaak for Windows



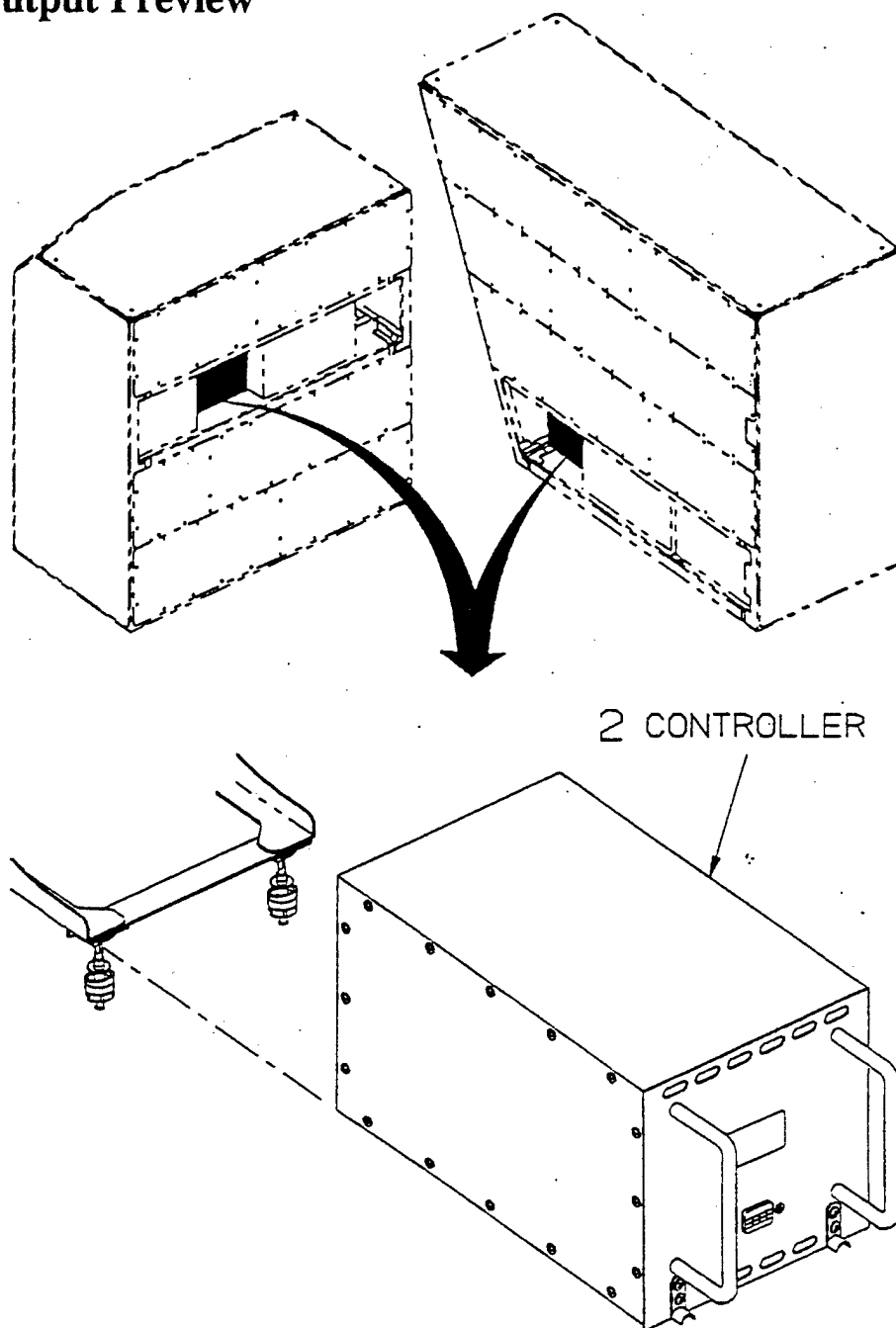
12.2 Output g42tiff/IslandPaint



(TYPICAL)

B2AJG2111-0104D

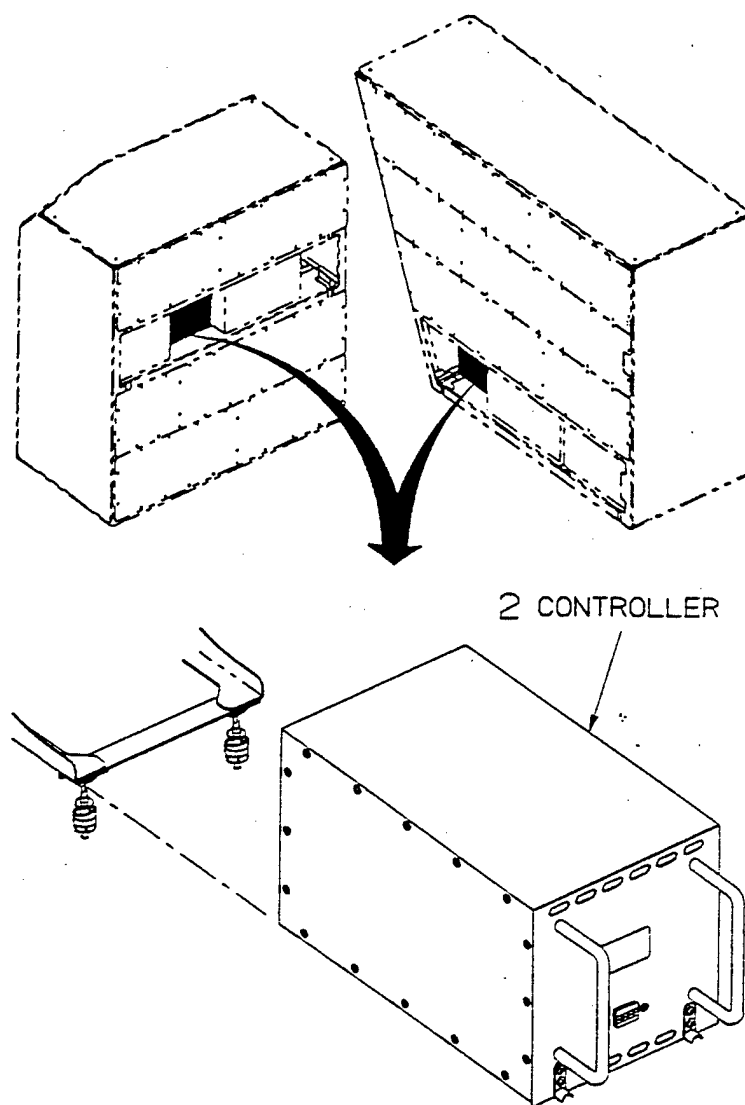
12.3 Output Preview



(TYPICAL)

B2AJG2111-0104D

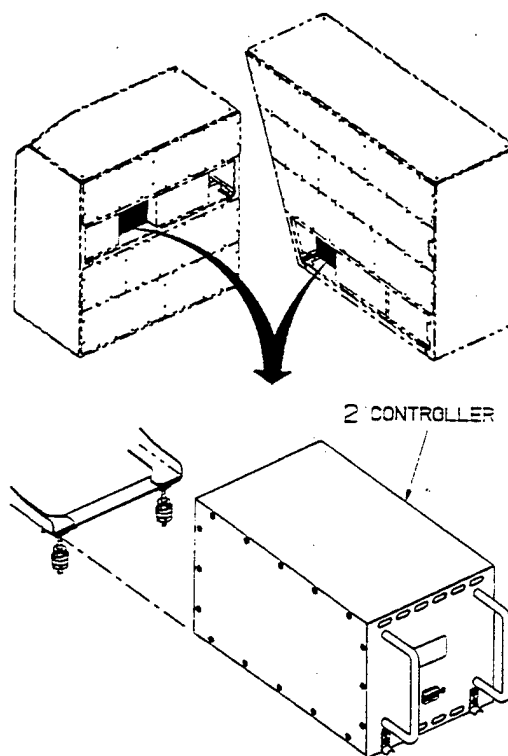
12.4 Output HiJaak/Ventura Publisher



(TYPICAL)

B2AJG2111-0104D

12.5 Output IGESView



(TYPICAL)

B2AJ02111-01040

13. Appendix E - Detailed CGM Analysis

13.1.1 Parser Log MetaCheck

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 04/13/93 Time: 12:41:41

Metafile Examined : i:\9330\c008

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

===== Trace Report =====

Tracing not selected.

===== CGM Conformance Violation Report =====

No Errors Detected

===== CALS CGM Profile (MIL-D-28003) Report =====

No profile discrepancies detected.

===== Conformance Summary Report =====

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 04/13/93 Time: 12:41:47

Name of CGM under test: i:\9330\c008.cgm

Encoding : Binary

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

BEGIN METAFILE string : "0103D.cgm"

METAFILE DESCRIPTION : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 154; string contains: "Picture 1"

Private values encountered in CGM

Conformance Summary : This file conforms to the CGM specification.

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

1 Pictures Tested
2192 Elements Tested
48616 Octets Tested

```
=====
| No Errors Were Detected |
=====
```

===== End of Conformance Report =====

13.1.2 validegmm Log

Analysis for file c008.cgm using table table

ERROR: illegal in this state (2), std B

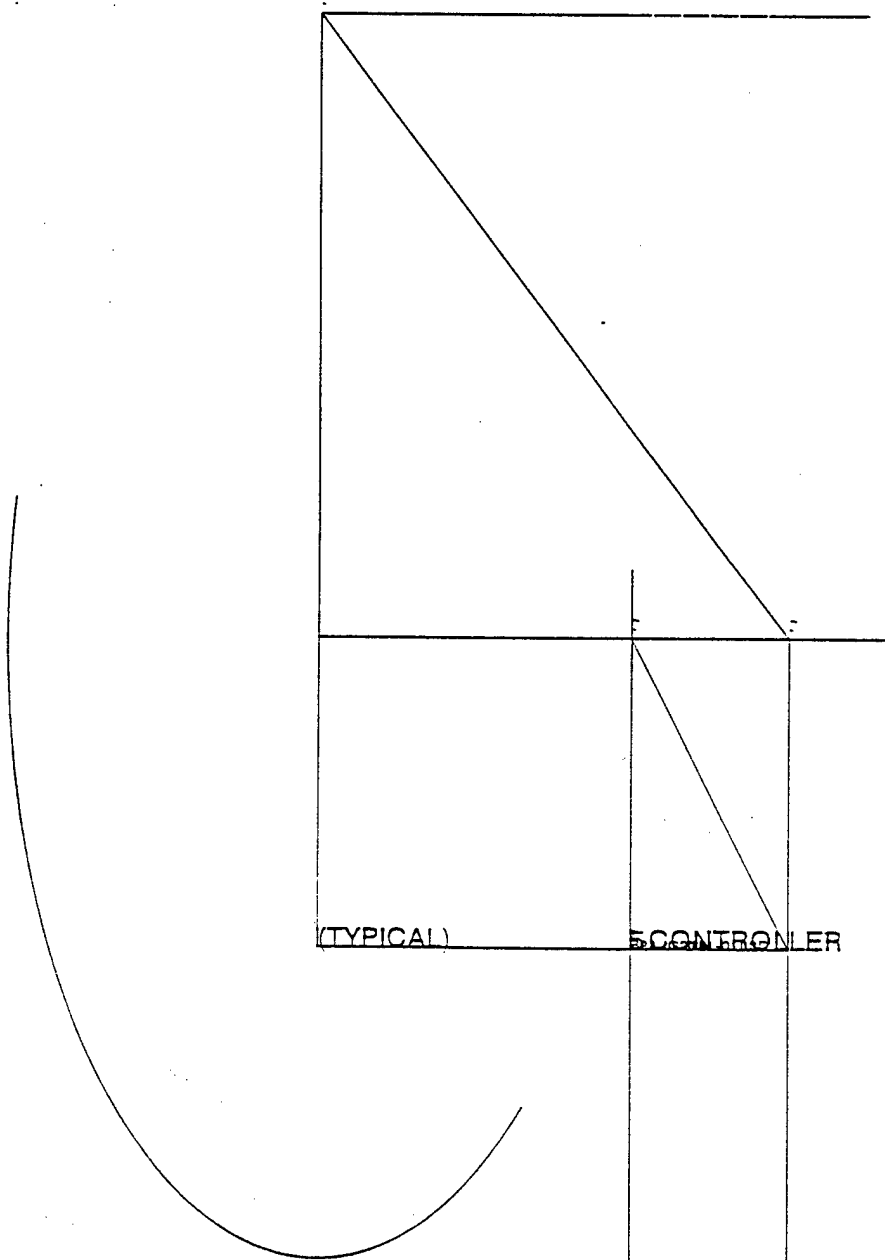
ERROR: required precursor (0, 4) not yet seen

(14.1, 0) (3, 6, 2) Clip Indicator OFF

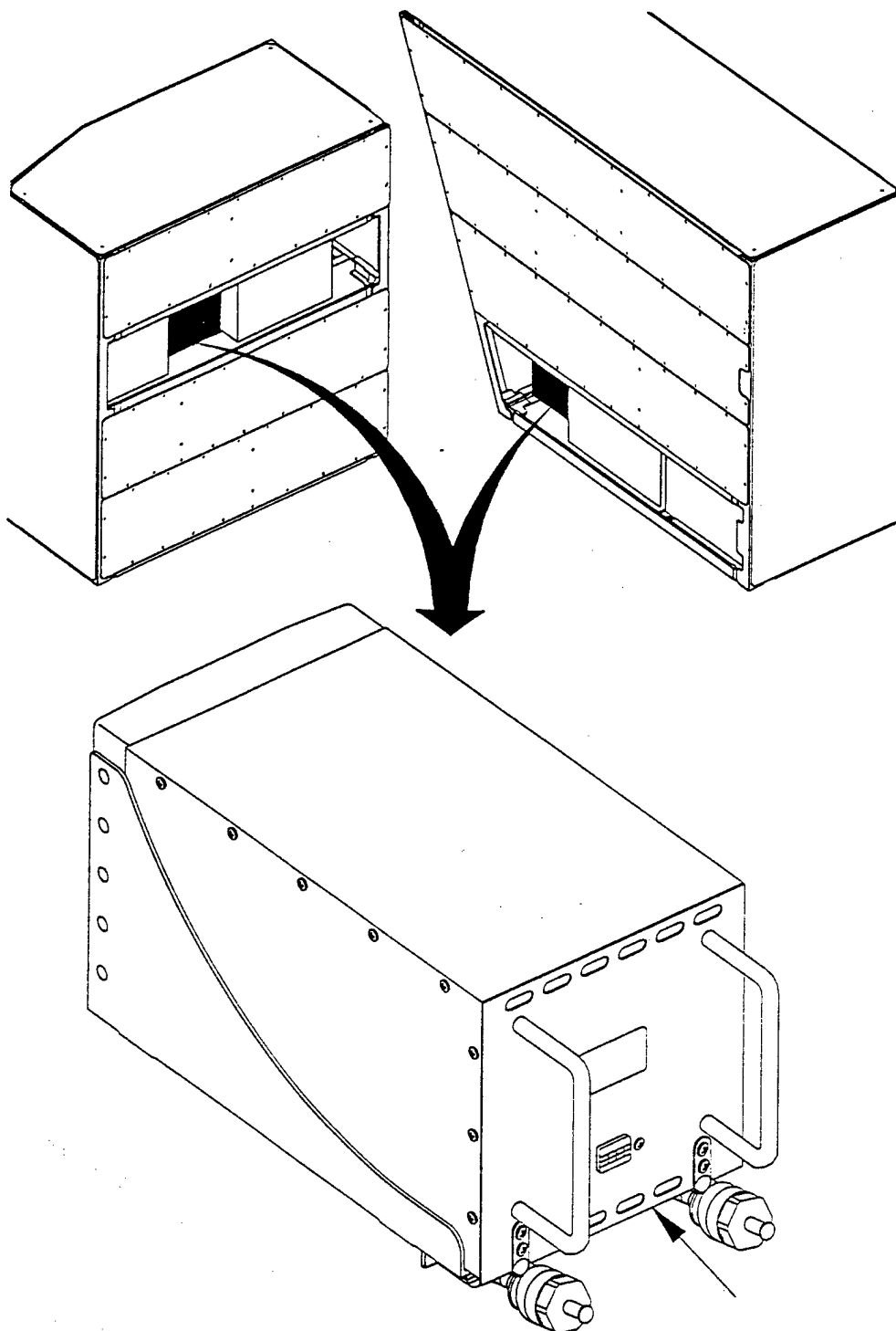
(0, 1) occurred 1 time
(0, 2) occurred 1 time
(0, 3) occurred 1 time
(0, 4) occurred 1 time
(0, 5) occurred 1 time
(1, 1) occurred 1 time
(1, 2) occurred 1 time
(1, 3) occurred 1 time
(1, 4) occurred 1 time
(1, 5) occurred 1 time
(1, 6) occurred 1 time
(1, 7) occurred 1 time
(1, 8) occurred 1 time
(1, 9) occurred 1 time
(1, 10) occurred 1 time
(1, 11) occurred 1 time
(1, 12) occurred 1 time
(1, 13) occurred 1 time
(2, 2) occurred 1 time
(2, 6) occurred 1 time
(2, 7) occurred 1 time
(3, 2) occurred 1 time
(3, 6) occurred 1 time

(3, 6) occurred illegally 1 time
(4, 1) occurred 624 times
(4, 4) occurred 5 times
(4, 7) occurred 5 times
(4, 15) occurred 20 times
(4, 17) occurred 165 times
(4, 18) occurred 565 times
(5, 2) occurred 99 times
(5, 3) occurred 99 times
(5, 4) occurred 99 times
(5, 10) occurred 1 time
(5, 12) occurred 3 times
(5, 13) occurred 3 times
(5, 14) occurred 1 time
(5, 15) occurred 4 times
(5, 16) occurred 4 times
(5, 17) occurred 1 time
(5, 18) occurred 1 time
(5, 22) occurred 95 times
(5, 23) occurred 2 times
(5, 27) occurred 93 times
(5, 28) occurred 93 times
(5, 29) occurred 93 times
(5, 30) occurred 95 times
(5, 34) occurred 1 time

13.1.3 Output Harvard Graphics



13.1.4 Output cgm2draw/IslandDraw



13.1.5 Output CADLeaf

